

Status of Wisconsin Agriculture, 2012

An annual report by the Department of Agricultural and Applied Economics, UW-Madison and Cooperative Extension, UW-Extension

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Preface

Status of Wisconsin Agriculture is an annual agricultural situation and outlook report authored (except where noted) by faculty in the Department of Agricultural and Applied Economics, University of Wisconsin-Madison. The report contains three parts. Part I provides a brief overview of the financial environment in the Wisconsin farming sector. In Part II, market analysts review current conditions in major Wisconsin commodity sub-sectors and offer their forecasts for 2012. Part III contains a special article that discusses factors likely to affect the 2012 Farm Bill and policy options likely to be considered in the new Bill.

Status of Wisconsin Agriculture can be downloaded at www.aae.wisc.edu/www/pub/. If you do not have internet access, contact Linda Davis by mail (Department of Agricultural and Applied Economics, UW-Madison, 427 Lorch Street, Madison, WI 53706) or phone (608-262-9488) to obtain a printed copy.

The faculty of the Department of Agricultural and Applied Economics welcomes your comments and questions on material in this report. We also encourage your suggestions regarding rural Wisconsin issues that we might address in subsequent editions.

Acknowledgements

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Status of Wisconsin Agriculture, 2012

Executive Summary

Wisconsin farmers as a whole earned a record high net farm income of \$2.4 billion in 2011. This was up about \$350 million from 2010 and three times the very depressed level of \$800 million in 2009. The new record in net farm income reflects record high prices for milk, cattle, hogs, corn and soybeans. For most farmers, these record prices generated enough additional revenue to offset much higher costs for some farming inputs.

Wisconsin's record net farm income was not shared equally among commodity sectors. Grain producers fared best. Wisconsin corn prices in 2011 averaged nearly 60 percent higher than 2010 and soybean prices were up about 20 percent. But record high prices for these critical livestock feed components trimmed the profits of livestock producers despite record gross receipts. For dairy farmers who purchased all of their feed in 2011, milk income over feed costs was about the same as 2010 even though milk prices were about \$4 per hundredweight higher.

Overall, Wisconsin farmers spent about \$1 billion more in 2011 than in 2010 for the goods and services (including rents) they needed to operate their businesses. The largest percentage cost increases were for feed (+23 percent), fertilizer (+30 percent), seeds (+27 percent) and rent (+15 percent).

In the aggregate, Wisconsin farmers' balance sheet was stronger at the end of 2010 than at the beginning, and it will improve again in 2011. Between 2009 and 2010, total assets rose \$1.9 billion and total debt climbed by \$700 million, mostly in

expanded real estate debt. This put farm equity at the end of 2010 at \$66.7 billion and the debt-to-asset ratio at 0.11, indicating a strong financial position.

Dairy farmers have made up most of the ground that they lost in 2009, when severely depressed milk prices led to a major reduction in equity. Their net worth fell by \$1.6 billion between 2008 and 2009 through a combination of devalued assets (primarily cows and financial assets) and increased debt. However, recovery was fairly rapid. By the end of 2010, dairy farmers regained all but \$270 million of the equity they lost in 2009.

2011 in Review

General Economy. Budget woes remained in the headlines in 2011 despite some recovery from the Great Recession of 2008-09. After a 3 percent GDP growth in 2010, the U.S. economy struggled to reach even half that rate in 2011. Economic growth is being held back by persistently high unemployment, a housing market in shambles and a U.S. Congress in gridlock. Anemic economic growth, combined with high food prices, have kept consumers' food expenditures in check. A weak dollar most of the year helped push up U.S. agricultural exports. But financial problems in the European Union have recently caused the dollar to strengthen, making U.S. agricultural products more expensive for overseas customers.

Farm Input Costs. Fertilizer and seed prices were up sharply in 2011. But while fertilizer cost more than it did in 2010, it still was much cheaper than it was four years ago, when high grain and soybean prices

induced a planting boom and a fertilizer shortage. In contrast, seed prices have climbed steadily, reflecting stronger demand and an improved product. Fuel prices were up, mainly due to supply uncertainties. Farmland rents have risen along with profits from crop production, and it has become increasingly common for landlords and renters to negotiate agreements that allow both parties to share above-target returns. Credit was cheap and readily accessible to qualified borrowers.

Dairy. U.S. milk cow numbers were up modestly in 2011 and high feed costs restrained milk per cow gain to less than 1 percent. U.S. milk production rose 1.7 percent to 196 billion pounds. Wisconsin production was just over 26 billion pounds, roughly the same as in 2010. While cow numbers were marginally higher, yield per cow was stagnant, partly the result of brutal mid-summer heat and humidity (July milk per cow was down 4 percent from year-earlier). The faltering U.S. economy along with higher retail prices constrained growth in domestic consumption. But dairy exports picked up the slack, reaching record-high levels in 2011 and increasing the U.S. dairy trade balance to almost a 2-to-1 ratio of exports to imports.

Livestock and Poultry. A very small increase in total meat supplies coupled with strong exports of beef and pork tightened domestic meat supplies in 2011. The result was record high prices for most livestock species. High retail prices served to ration the red meat supply. Wholesale turkey prices were up about 10 percent, but broiler prices were below 2010 levels.

Corn and Soybeans. U.S. grain and oilseed producers had a great year. USDA estimates the national average farm-level corn price for the 2010/11 season to be about \$5.20 per bushel, compared to \$3.55 in the previous season. Season-average soybean prices are estimated at \$11.30 per bushel, up from \$9.59 in 2009/10. Nearly 40 percent of total corn usage—more than 5 billion bushels—went to ethanol plants in the 2010/11 marketing year. Corn used for feed and exported fell below last year’s levels.

Fruits and Vegetables. Better weather made 2011 a less challenging year for the state’s fruit growers. Production of cranberries, tart cherries and apples were all higher than 2010, with the cherry crop up 53 percent. But Wisconsin potato and vegetable growers suffered through a long, cold, wet spring, which kept planting equipment out of fields until May or even June in many cases. The result was lower yields in general, down 8–9 percent for potatoes. Planted acreages of sweet corn, snap beans and peas for processing were all down in 2011. High returns from field crops, especially corn, have made growers less interested in signing contracts with processors.

2012 Preview

General Economy. While the outlook for the U.S. economy in 2012 is murky, agriculture is somewhat insulated from the forces battering the general economy. Agriculture fared better than the rest of the economy in 2011 and will likely do so again in 2012. However, the looming Euro crisis could change that positive outlook. In particular, if

there is a continued flight from the Euro to the U.S. dollar as a safe haven for foreign funds, the resulting strengthening of the dollar would seriously erode agricultural trade prospects

Farm Input Costs. Most farm input prices are expected to rise by only a small amount in 2012. Fertilizer prices have stabilized somewhat as supply has come closer to meeting expanded demand. But the direction of fuel prices is highly uncertain due to unstable international political conditions. Land rents will rise along with rising land values. Credit will remain plentiful and cheap by historical standards

Dairy. Wisconsin milk prices in 2012 could fall \$1.50 to \$2.00 per hundredweight from their lofty level of 2011, but they probably won’t drop that far. Much depends on weather here and abroad, especially in New Zealand, our principal dairy export competitor. With higher grain prices almost certain, margins will be much tighter than in 2011, especially for dairy farmers who purchase all or most of their feedstuffs. Domestic sales of dairy products will be influenced by U.S. economic conditions, but smaller increases in retail prices should bring gains at least as large as last year. Exports are more uncertain, but are unlikely to exceed the records set in 2011.

Livestock and Poultry. Due in large part to the severe drought in the Southwest, total meat supplies are expected to fall by about 2 percent in 2012. Heavy drought-related culling of cows has cut cattle inventory, and beef export opportunities will be reduced by stronger competition from Australia and Canada. Pork production could climb a bit,

but not nearly enough to offset the drop in beef supplies. Broiler output will be down and turkey meat production up slightly. Because of the overall decrease in the U.S. meat supply, prices for all species will likely be higher.

Corn and Soybeans. Grain growers can expect another great year. USDA is currently forecasting 2011/12 corn prices in the mid-\$6 per bushel range, more than \$1 per bushel higher than 2010/11. Soybean price increases will be more modest, probably less than 50 cents per bushel. The elevated corn price forecast comes from a disappointing 2011 harvest relative to early expectations. Cold, wet conditions delayed planting, cutting corn yields by 6 bushels per acre from 2010/11 and 18 bushels from 2009/10. Despite price rationing, which is expected to drop exports by 18 percent and feed use by 4 percent, the ratio of ending stocks to corn use will likely be record low. But growers need to be aware that a bin-busting 2012 corn harvest could burst the corn price bubble.

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This year’s special article is about the 2012 Farm Bill, which will replace the Food, Conservation, and Energy Act of 2008 that expires on September 30, 2012. The process of developing new farm and food legislation has taken unusual twists and turns, and we know much less about what to expect than is usually the case at this point in the Farm Bill cycle. But we do know that pressures to cut federal spending will have a major impact on the new Farm Bill, leading to creative, less costly programs.

Wisconsin Farm Balance Sheet

Wisconsin's aggregate farm balance sheet confirms that 2010 was a good year for farmers. Farm equity increased \$1.2 billion, more than offsetting the \$0.7 billion decline in equity incurred in 2009.

As in years past, Wisconsin farmers' increased equity was largely due to higher real estate values. Land and farm buildings rose in value by about \$1 billion in 2010 and the value of farm operators' dwellings increased around \$750 million. Increased real estate values were partially offset by increased real estate borrowing. Wisconsin farmers took on nearly \$1 billion of additional real estate debt in 2010.

Wisconsin farmers' liquid reserves, or working capital (computed by subtracting current liabilities from current assets), increased in 2010 to \$4.65 billion, up from \$4.2 billion in 2009, signaling that farmers were generally profitable in 2010 and had positive cash flow. They still have a way to go, however, to get back to the \$5.2 billion of working capital they had in 2008.

The debt load of Wisconsin's farm sector grew a bit in 2010 but remains relatively low. As of 2010, farmers had about 11 cents of debt per \$1 of assets, up slightly from 10.5 cents in 2009 and 9.4 cents in 2008. This bump in the debt-to-asset ratio indicates that farmers' borrowing increased slightly faster than the value of their farm assets. But this uptick is not a major concern—the debt-to-asset ratio in 2010 was only half of what it was during the farm financial crisis of the early 1980s.

Dairy Balance Sheet Compared to All Other farms

Between 2003 and 2010, the total value of Wisconsin farm assets (excluding operators' dwellings) rose by about \$20 billion, while the value of dairy farmers assets held

| Wisconsin Farm Balance Sheet on December 31 | | | |
|---|---------------|--------------|--------------|
| | 2008 | 2009 | 2010 |
| | (Billions \$) | | |
| Current Assets | | | |
| Livestock inventory | 0.83 | 0.93 | 0.76 |
| Crop inventory | 2.00 | 1.88 | 2.11 |
| Purchased inputs | 0.37 | 0.42 | 0.40 |
| Cash invested in growing crops | 0.05 | 0.07 | 0.08 |
| Prepaid insurance | 0.06 | 0.06 | 0.06 |
| Other current assets | 3.50 | 2.69 | 3.06 |
| Total Current Assets | 6.82 | 6.04 | 6.46 |
| Non-current Assets | | | |
| Breeding animals | 3.17 | 2.90 | 2.92 |
| Farm equipment | 6.23 | 7.13 | 7.03 |
| Investment in cooperatives | 0.23 | 0.49 | 0.24 |
| Land and buildings | 47.22 | 47.94 | 48.91 |
| Operators dwelling | 9.34 | 8.68 | 9.52 |
| Total Non-current Assets | 66.19 | 67.14 | 68.62 |
| Total Farm Assets | 73.01 | 73.18 | 75.08 |
| Current Liabilities | | | |
| Notes payable within one year | 0.54 | 0.62 | 0.54 |
| Current portion of term debt | 0.71 | 0.81 | 0.83 |
| Accrued interest | 0.19 | 0.22 | 0.24 |
| Accounts payable | 0.17 | 0.18 | 0.21 |
| Total Current Liabilities | 1.62 | 1.84 | 1.81 |
| Non-current Liabilities | | | |
| Nonreal estate | 1.17 | 1.37 | 1.21 |
| Real estate | 4.03 | 4.47 | 5.36 |
| Total Noncurrent Liabilities | 5.20 | 5.84 | 6.56 |
| Total Farm Liabilities | 6.83 | 7.68 | 8.38 |
| Farm Equity | 66.18 | 65.50 | 66.70 |

Source: Agricultural Resource Management Survey, Economic Research Service, USDA

constant. There are two likely reasons for this. First, a significant share of dairy farmers' assets consists of cows, so gains in real estate values had relatively less impact on their balance sheet. In fact, the total number of acres held by dairy farmers is probably declining, as larger dairy farms outsource more of their feed and forage supplies to other farmers (many of them former dairy farmers). Second, there was little net expansion of other dairy farm assets.

Dairy farmers who expanded did so by acquiring cows and some other fixed assets from producers who left the business. The net effect was no increase in the total value of assets held by all Wisconsin dairy farms.

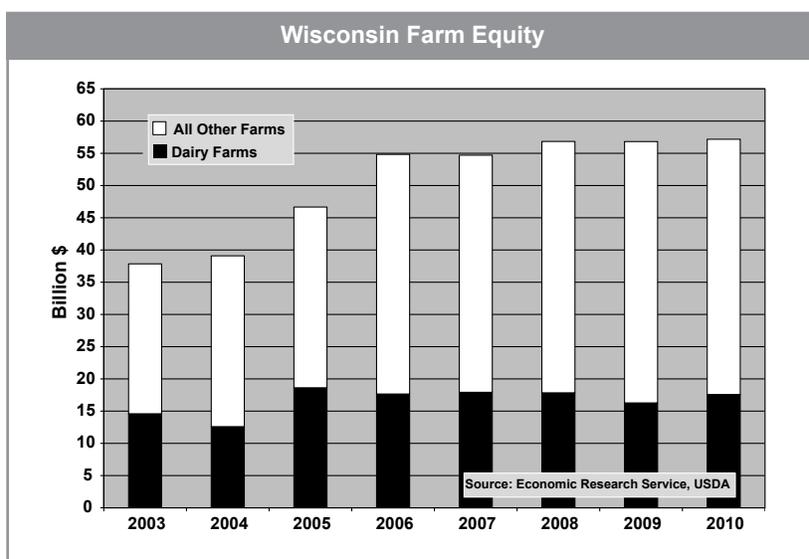
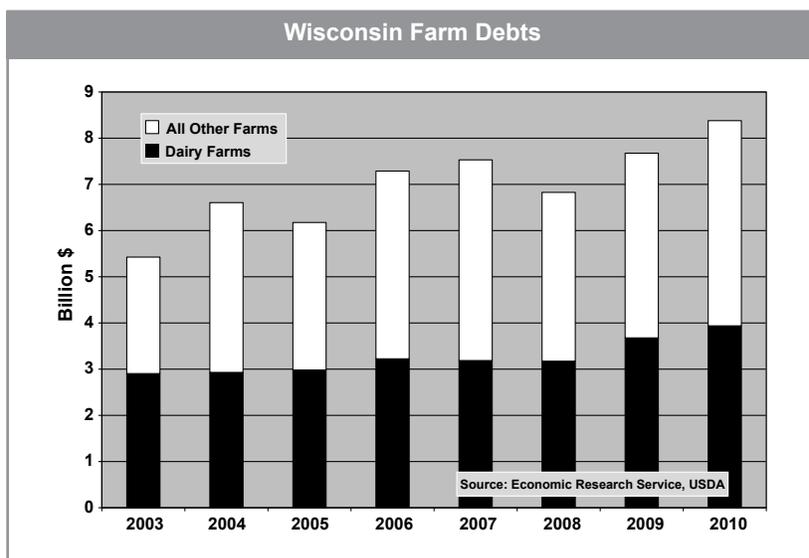
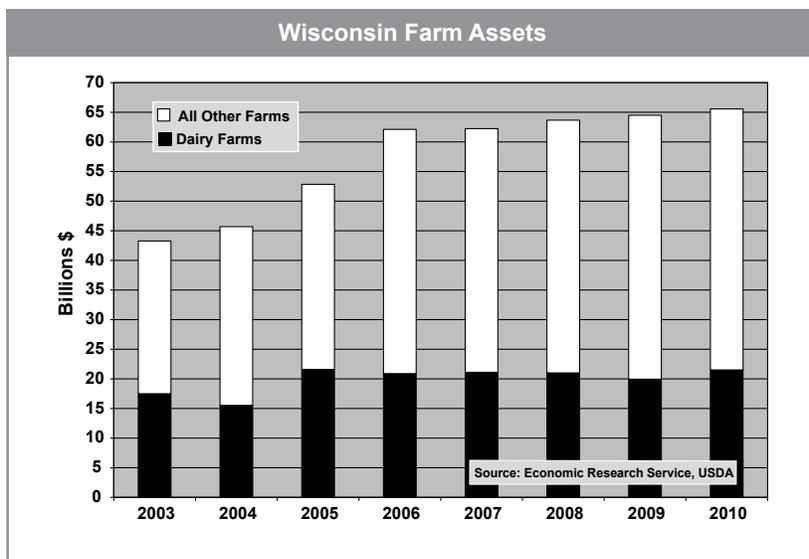
Total Wisconsin farm debt continues to be split roughly equally between dairy farms and all other types of farms. In 2003 dairy farms accounted for about \$3 billion of the nearly \$6 billion of loans out-

standing to Wisconsin farmers. In 2010, \$4 billion of the roughly \$8 billion of outstanding farm loans in Wisconsin were to dairy farms.

The wealth of all Wisconsin farms, reflected by equity, rose dramatically between 2003 and 2006 and then held constant through 2010. Dairy farms also enjoyed equity gains between 2003 and 2006, but their equity positions declined slightly over the 2006–2010 period.

The slight dip in dairy farmers' equity is somewhat surprising given that, except for 2009, their earnings were relatively strong. The decline may reflect structural change in the industry over the past decade. As older farmers sold their cows and other assets to fund their retirement, this flow of equity out of dairy would cause total equity to drop even when earnings are adequate to strong.

It is a bit surprising that dairy farms do not account for a larger share of Wisconsin's total farm equity. Since dairying generates over half of the state's cash farm receipts, it would seem to follow that milk producers would hold something close to half the state's farm equity, but this is not the case. It is possible that not all of the farm assets acquired for dairy farming show up on the dairy balance sheet. Many cash grain farms, cow-calf operations, and other farms were dairy farms before they converted to other farming activities. Another reason for the unequal ratio is that crop farmers have more of their assets in the form of land, which has appreciated in value substantially faster than other assets over the last decade.



Changes in Wisconsin Farm Cash Receipts and Production Costs

The first decade of the 21st century brought notable changes in the source of Wisconsin farm cash receipts and cash expenses. Total cash receipts between 2001–03 and 2008–10 rose by about 50 percent, but the percentage increase in revenue from crops was almost double that of livestock. This mostly reflects much higher prices for corn and soybeans in the latter part of the decade. Wisconsin wheat sales more than tripled over the decade, but wheat remains a minor crop here. Fruit sales were up sharply on improved cranberry returns, but vegetable sales changed little, as did sales of commodities in the “all other crops” category.

Dairy continues to dominate the Wisconsin livestock sector, but the percentage of total Wisconsin farm cash receipts represented by milk sales slipped from 50 percent in 2001–03 to 46 percent in 2008–10.¹ Meat animal sales showed relatively little gain, while poultry sector sales were up 69 percent. The largest percentage gain in livestock cash receipts came from “miscellaneous livestock.” Data on most of the large number of livestock products within this category are sparse or nonexistent. But aquaculture, mink and non-meat products of sheep and goats are believed to account for most of the increased sales in this category.

Looking at farm costs across all categories, the 49 percent increase between 2001–03 and 2008–10 was almost the same as the percentage increase in cash receipts. A rise in feed costs mirrored the change in cash receipts for feed crops. Cost of feed purchased increased by more than \$600 million, or 83 percent. Seed costs were also up sharply, partly due to more use of higher-priced GMO varieties.

| Commodity | Value (\$1,000) | | Change | |
|-------------------------------|------------------|------------------|------------------|-----------|
| | 2001-03 | 2008-10 | \$1,000 | Percent |
| Livestock | | | | |
| Dairy Products | 2,915,220 | 3,996,469 | 1,081,249 | 37 |
| Meat Animals | 793,214 | 915,632 | 122,418 | 15 |
| Poultry & Eggs | 242,626 | 408,984 | 166,358 | 69 |
| Misc. Lvst. ^{1/} | 166,817 | 357,974 | 191,157 | 115 |
| Total Livestock | 4,117,877 | 5,679,059 | 1,561,183 | 38 |
| Crops | | | | |
| Feed Crops ^{2/} | 646,339 | 1,214,638 | 568,299 | 88 |
| Food Grains ^{3/} | 35,830 | 110,843 | 75,012 | 209 |
| Soybeans | 208,567 | 575,814 | 367,248 | 176 |
| Fruits | 117,395 | 244,988 | 127,593 | 109 |
| Vegetables | 448,355 | 524,295 | 75,939 | 17 |
| All Other Crops ^{4/} | 302,078 | 342,882 | 40,804 | 14 |
| Total Crops | 1,758,565 | 3,013,460 | 1,254,895 | 71 |
| All Commodities | 5,876,441 | 8,692,519 | 2,816,078 | 48 |

Source: Economic Research Service, USDA. Receipts do not include the value of home consumption, change in inventory value, or government farm payments.

^{1/}Major Wisconsin other livestock product includes aquaculture, honey, sheep and goat milk and mink.

^{2/}Primarily corn for grain, but also includes barley, oats, sorghum and forage (hay and corn silage) sales.

^{3/}Primarily wheat, but a small amount of rye sales are also included.

^{4/}Greenhouse and nursery products dominate this category

Spending for fertilizer and petroleum more than doubled between 2001–03 and 2008–10. For fertilizers, this is due both to higher prices for all types of fertilizer and higher use, mainly due to expanded corn acreage. Higher petroleum costs were almost entirely due to higher crude oil prices. Costs of pesticides and electricity increased modestly. The fact that spending for pesticides didn’t go up as much as that for other crop inputs may indicate that some of the higher costs of disease- and pest-resistant GMO seeds are being offset by cutbacks in herbicides and insecticides.

Costs of “other purchased inputs” increased an average of 43 percent, markedly less than the percentage increase for manufactured inputs and those produced on the farm. The percentage increase in payments to stakeholders and government was even less, averaging 15 percent. That small overall category change is attributable to the 5 percent increase in the cost of hired labor, the largest cost component in the category. This surprisingly small increase in labor costs is probably due to continued substitution of capital for labor on large commercial farms in the state and less hired labor used on residential lifestyle farms.

¹Adding dairy farm revenue from the sale of cull cows and dairy replacements would bring dairy farm milk and livestock sales to more than 50 percent of total Wisconsin farm cash receipts in 2008-2010.

Selected Wisconsin Farm Expenses, 2001–03 and 2008–10 Averages

| <i>Expense</i> | <i>Expenditure (\$1,000)</i> | | <i>Change</i> | |
|--|------------------------------|------------------|------------------|-----------|
| | <i>2001-03</i> | <i>2008-10</i> | <i>\$1,000</i> | <i>%</i> |
| <i>Purchased inputs:</i> | | | | |
| <i>Farm origin</i> | | | | |
| Purchased Feed | 731,968 | 1,340,000 | 608,032 | 83 |
| Purchased livestock and poultry | 82,567 | 110,233 | 27,665 | 34 |
| Purchased Seed | 268,586 | 510,000 | 241,414 | 90 |
| Total | 3,368,801 | 5,516,312 | 2,147,511 | 64 |
| <i>Manufactured inputs</i> | | | | |
| Fertilizers and lime | 270,302 | 573,333 | 303,032 | 112 |
| Pesticides | 209,930 | 260,000 | 50,070 | 24 |
| Petroleum fuel and oils | 197,466 | 460,305 | 262,840 | 133 |
| Electricity | 150,320 | 176,367 | 26,047 | 17 |
| Total | 828,017 | 1,470,006 | 641,989 | 78 |
| <i>Other purchased inputs</i> | | | | |
| Repairs and maintenance | 468,090 | 618,059 | 149,969 | 32 |
| Machine hire and custom work | 138,810 | 171,101 | 32,292 | 23 |
| Marketing, storage, hauling | 178,270 | 252,226 | 73,956 | 41 |
| Miscellaneous expenses | 658,294 | 1,020,431 | 362,137 | 55 |
| Total | 1,457,662 | 2,086,074 | 628,412 | 43 |
| Total Purchased Inputs | 3,368,801 | 5,516,312 | 2,147,511 | 64 |
| <i>Payments to stakeholders & government:</i> | | | | |
| Total hired labor | 634,063 | 665,951 | 31,888 | 5 |
| Net rent | 118,897 | 178,882 | 59,985 | 50 |
| Interest | 425,313 | 504,644 | 79,331 | 19 |
| Property taxes and licensing fees | 322,124 | 397,251 | 75,128 | 23 |
| Total | 1,178,272 | 1,349,477 | 171,204 | 15 |
| <i>Total, Purchased inputs and Stakeholder/Govt. payments</i> | 4,869,197 | 7,263,040 | 2,393,843 | 49 |

Source: Economic Research Service, USDA.

Effect of Variability in Farm Income on Farm Household Income

One of the purposes of U.S. farm programs is to help stabilize farmers' incomes. This objective has been pursued through price supports, countercyclical payments and direct income subsidies such as the direct payments mandated by the current farm bill. As noted in the special article in this year's report, it is very likely that these income supports for farmers will be scaled back or possibly eliminated in an effort to reduce the federal budget deficit. This raises the question of how a reduction in farm subsidies—or reduced farm income in general—would affect Wisconsin farm household income.

The following table shows how Wisconsin farm household incomes could change by size and type of farm if income from farming (including government payments) declined by 10 percent. These estimates were computed using household income measures obtained from the USDA's Agricultural Resource Management Survey.

The table indicates a drop of less than 1 percent drop in the household incomes of farms operated by retirees or individuals for whom farming is not the principal occupation. Most of the household income of such farms, which include the majority of Wisconsin farms, comes from nonfarm earnings. Net farm income is negative for many of them.

There would also be minimal impact on farm households whose operators claim farming as their occupation but who generate less than \$100,000 annually in farm sales. These farmers typically have part time off-farm jobs and their spouses often work full-time off the farm. Many experience losses from their farming operations.

**Percentage Change in Farm Household Income (Income from farming plus income from non-farm sources)
Resulting From a 10 Percent Decrease in Farm Income**

| | <i>Farm Type</i> | | | | | | |
|--|-------------------|-----------------------------------|---|------------------|------------------|------------------|------------------|
| | <i>Retirement</i> | <i>Residential/ lifestyle</i> | <i>Family Farms by Annual Sales (\$1,000)</i> | | | | <i>All Farms</i> |
| | | | <i>< \$100</i> | <i>\$100-250</i> | <i>\$250-500</i> | <i>>\$500</i> | |
| No of Farms* | 13,455 | 32,878 | 13,135 | 8,570 | 4,695 | 2,980 | 75,713 |
| Farm Income* | -1,426 | -6,722 | -1,521 | 32,754 | 68,799 | 149,175 | 10,546 |
| Non-Farm Income* | 53,872 | 90,733 | 40,140 | 26,071 | 29,706 | 38,610 | 62,058 |
| Total Household Income* | 52,446 | 84,011 | 38,619 | 58,825 | 98,505 | 187,785 | 72,604 |
| <i>Percent change in Household Income with 10 Percent Decrease in Farm Income</i> | | | | | | | |
| 2004 | -0.12 | -0.35 | -0.15 | -5.23 | -6.96 | -8.27 | -1.55 |
| 2005 | -0.58 | -0.70 | -0.07 | -6.72 | -8.42 | -8.85 | -3.06 |
| 2006 | -0.32 | -0.89 | -0.92 | -4.96 | -5.47 | -7.46 | -2.01 |
| 2007 | -0.49 | -0.61 | -0.52 | -6.50 | -6.88 | -8.49 | -2.47 |
| 2008 | -0.39 | -1.17 | -0.80 | -5.55 | -7.47 | -8.18 | -2.92 |
| 2009 | -0.39 | -1.33 | -0.13 | -3.69 | -6.80 | -5.98 | -2.25 |
| 2010 | -0.61 | -0.81 | -0.15 | -5.45 | -6.29 | -7.89 | -2.58 |
| Average | -0.42 | -0.84 | -0.39 | -5.44 | -6.90 | -7.88 | -2.41 |

*Averages for 2004-2010

Households on farms with annual farm sales between \$100,000 and \$250,000 would feel a much larger bite. These farms are too large to permit substantial off-farm employment, so farm income comprises a larger share of household income.

More heavily impacted would be households on farms with annual sales over \$250,000. The impact is not dollar for dollar, however, because even these larger farms generate some income from off-farm sources.

There are relatively few Wisconsin farms with annual sales over \$250,000, but they generate the bulk of gross farm sales. So the overall impact of a 10 percent reduction in farm income on aggregate farm household income (-2.4 percent) is much larger than the impact on smaller Wisconsin farms.

II. Current Outlook: Wisconsin Agricultural Commodities, Production Inputs and the General Economy

In this section, analysts discuss the current economic situation and the 2012 outlook for Wisconsin agriculture. We begin with a discussion of the general U.S. economy, which has a major impact on agriculture through its effect on domestic food demand and agricultural exports. Next, conditions and prospects for major farm inputs are discussed. Finally, commodity specialists offer their insights on what happened in 2011 and what to expect in 2012 for major Wisconsin farm commodities: dairy, livestock and poultry, corn and soybeans, and fruits and vegetables. Readers are encouraged to contact authors for more current or more specific information regarding their analyses.

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General Economy and Agricultural Trade

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Synopsis

Improvements in U.S. employment figures and retail sales late in 2011 point to modestly more rapid U.S. economic growth in 2012. Still, U.S. real Gross Domestic Product (GDP) is likely to grow by only about 2 percent in 2012. Slow growth recovery periods are common for recessions that stem from deep financial crises like the one that produced the Great Recession of 2007-2009. While the U.S. economy now is less likely to tip back into recession, a recession scenario could re-emerge if the economy is hit by an exogenous economic shock—something big and bad happening elsewhere that reverberates globally.

One example of such a shock would be a deep recession in Europe, which could limit U.S. exports and create problems for U.S. banks holding European debt. In addition, headwinds that limited U.S. economic growth in 2011 will continue to buffet the economy in 2012.

Those headwinds include a housing sector that is in the middle of a “lost decade,” high unemployment, grid-

lock that prevents Congress from putting U.S. budget deficits on a sustainable path, and the exhaustion of fiscal and monetary measures for stimulating the economy.

The U.S. farm economy will continue to perform better than the overall economy in 2012. While U.S. net farm income in 2012 will fall short of the lofty \$101 billion figure recorded in 2011, it will remain strong, thanks in large part to robust farm exports. But those exports could be curtailed by a deep recession in Europe that spreads to growth markets for farm exports.

High commodity prices, low interest rates and high farm incomes in the U.S. have spurred a sharp rise in farmland prices. Farmland prices in several Midwestern and Western states rose by 25 percent from year-earlier levels in 2011. This has caused analysts to question whether a bubble is forming in farmland prices. If so, it’s unlikely to be anywhere near the magnitude of the farmland price bubble that caused the farm financial crisis in the 1980s.

Another bright spot for the economy is the prospect of relatively tame inflation for 2012 and beyond. The

overall consumer price index (CPI) is likely to increase by only about 1.5 to 2.0 percent in 2012. But U.S. food prices are likely to increase faster; by 2.5 to 3.5 percent according to USDA forecasts.

The Legacy of the Great Recession

The macroeconomic statistics in the following table suggest that the U.S. economy experienced what in retrospect must look like a brief golden era in 2003 to 2006. In this period, real GDP grew by nearly 3 percent per year, unemployment averaged 5.3 percent, inflation averaged 2.9 percent, housing starts averaged 1.9 million per year and budget deficits on average were a manageable \$339 billion per year. However, the strong housing start figures foreshadowed a housing bubble that contributed mightily to the Great Recession of 2007 to 2009.

The grim legacy of the Great Recession, which officially ended in mid-2009, is evident. In the wake of the Great Recession, real GDP growth has been weak compared to growth in other recovery periods, unemployment has been stuck at near 9 percent, housing starts have aver-

Macroeconomic Statistics for the U.S. Economy

| <i>Year or Quarter</i> | <i>Real GDP Growth</i> | <i>Unemployment Rate</i> | <i>Inflation Rate (CPI)</i> | <i>Housing Starts</i> | <i>Federal Surplus or Deficit</i> |
|------------------------|------------------------|--------------------------|-----------------------------|-----------------------|-----------------------------------|
| | % | % | % | (Mil. Units) | \$ Billion (FY) |
| 2000 | 3.7 | 4.0 | 3.4 | 1.573 | 236.1 |
| 2001 | 0.8 | 4.7 | 2.8 | 1.601 | 126.9 |
| 2002 | 1.8 | 5.8 | 1.6 | 1.710 | -160.3 |
| 2003 | 2.5 | 6.0 | 2.3 | 1.854 | -377.1 |
| 2004 | 3.6 | 5.5 | 2.7 | 1.950 | -412.8 |
| 2005 | 3.1 | 5.1 | 3.4 | 2.073 | -318.7 |
| 2006 | 2.7 | 4.6 | 3.2 | 1.812 | -248.2 |
| 2007 | 1.9 | 4.6 | 2.9 | 1.342 | -161.5 |
| 2008 | -0.3 | 5.8 | 3.8 | 0.900 | -454.8 |
| 2009 | -3.5 | 9.3 | -0.3 | 0.554 | -1,415.7 |
| 2010 | 3.0 | 9.6 | 1.6 | 0.585 | -1,294.2 |
| 2011 Q1 | 0.4 | 8.9 | 5.2 | 0.582 | -460.5 |
| Q2 | 1.3 | 9.1 | 4.1 | 0.572 | -141.1 |
| Q3 | 1.8 | 9.1 | 3.1 | 0.615 | -328.1 |

*Source: Global Insight, U.S. Executive Summary, various issues, 2011. Quarterly housing start figures for 2011 represent estimates of annual figures for the series.

aged only about 28 percent of the 2005 peak figure, and budget deficits breached the trillion dollar figure in 2009. The large budget deficits reflect, in part, increased government spending to combat the Great Recession.

The U.S. experience with a recession stemming from a financial crisis is not unusual. Economists Carmen Reinhart (Peterson Institute for International Economics) and Vincent Reinhart (American Enterprise Institute) studied the impact of recessions stemming from financial crises. They reported on experiences of a group of “Big Five” economies (Spain, Norway, Finland, Sweden and Japan) and other countries that have had financial crises, were hit

by recession and de-leveraged since the mid-1970s. They found that economic growth and inflation-adjusted home prices frequently fell in these countries in the decade following the financial crisis, while unemployment grew. They also noted that de-leveraging (paying down debt) by consumers and governments contributed substantially to weak recoveries.

Headwinds Facing the U.S. Economy

Familiar headwinds facing the U.S. economy will force additional de-leveraging and contribute to a labored recovery. Financial writers have provided extensive coverage of these forces. Therefore, only selected headwinds receive treatment here.

Housing: Problems in the U.S. housing sector are clearly among the most significant impediments to strong economic growth. Previous recovery periods from U.S. recessions often featured a robust recovery of the housing sector. This is not the case in the aftermath of the Great Recession.

U.S. home prices continue to be depressed by weak demand, relatively slow economic growth, high unemployment and a large supply of foreclosed-upon houses and other distressed properties. Average U.S. home prices in mid-2011 were down about 30 percent from pre-recession peaks. In the third quarter of 2011, U.S. house prices were about 4 percent lower than a year earlier. Over the longer-run, U.S.

housing prices increase at about the same rate as inflation. But economists surveyed by the Wall Street Journal project that U.S. home prices will not rise as fast as inflation in the next three years. In the aggregate, the statistics suggest that the U.S. housing sector is in the middle of a lost decade.

Not all housing news is bad. Nationwide, the ratio of home prices to yearly rents in late 2011 was 11.3, down from 18.5 at the peak of the housing bubble. This makes buying a home an attractive alternative to renting. Low mortgage interest rates available to borrowers with good credit provide additional incentives for home purchases.

Unemployment: Federal Reserve Chairman, Ben Bernanke, has described U.S. unemployment as a national crisis. While the drop in the unemployment rate in November 2011 to 8.6 percent was welcome news, joblessness is still a big problem. Employers added 120,000 jobs in November, enough to keep up with the growth in the labor force. But about half of the decline in the jobless rate came from people dropping out of the labor force, meaning they no longer count as unemployed. In the aggregate, about

14 million U.S. workers people were unemployed in the fourth quarter of 2011. Nearly a third of them hadn't worked in a year or more. Because job skills of the long-term unemployed deteriorate, it is difficult for them to compete when jobs become available.

Narrowly defined, the unemployment rate averaged about 9 percent during much of 2011, but more inclusive measures of unemployment put the percentage at about 16 percent. The larger figure also includes part-time workers seeking

full-time work and those who have stopped looking for work but who might return to the labor force. Analysts at Global Insight forecast that U.S. unemployment (narrowly defined) will average about 9 percent for 2012 and 2013.

Short-term fiscal and monetary policy measures have proven to be ineffective for remedying the employment crisis. Indeed, the persistence of high unemployment probably encourages additional deleveraging by currently employed workers who fear job loss. Carefully targeted, longer-term measures that contribute to growth of the economy, retraining of workers, and policies that support small businesses appear to be a high priority for reducing unemployment.

Gridlock in the Congress: Policies that might foster stronger recovery of the economy are hampered by hyper-partisanship in Congress. A key issue relates to federal deficits which are on an unsustainable path. If unchecked, the deficits eventually will produce additional credit downgrades, higher interest rates on U.S. sovereign debt and European-style debt problems.

The Congress has plausible information on how much U.S. budget deficits must be reduced to put them on a sustainable path. The Congressional Budget Office (CBO) developed estimates for the National Commission on Fiscal Responsibility and Reform (Simpson-Bowles Commission) in 2010 showing that deficits need to be reduced by about \$4 trillion by 2020 to achieve a sustainable path.

But the carefully developed Simpson-Bowles Commission report came under scathing criticism from both ends of the political continuum. The formula used to arrive at the \$4 trillion deficit

reduction—a combination of one-third revenue increase and two-thirds spending cuts—was criticized by some in both parties as unbalanced or unrealistic.

Efforts to reduce the deficits continued in 2011 with limited positive results. The Joint Committee on Deficit Reduction—the Super Committee authorized by the Budget Control Act of August 2011—was charged with developing plans that would reduce budget deficits by at least \$1.2 trillion by 2021. The Super Committee failed, triggering across-the-board cuts (sequestration) of spending, equally split between security and non-security spending during 2013 to 2021. The sequestration cuts, especially those for the Defense Department, are so objectionable to many in both political parties that Congress is likely to partially rescind them.

In addition to fixing sequestration, the Congress faces other unfinished business relating to deficits. The \$1.2 trillion deficit reduction tied to sequestration plus an additional \$917 billion in savings the Deficit Budget Control Act is supposed to produce would bring the total to about \$2.1 trillion. Budget deals tend to over-promise and under-deliver. But even if the promised figures materialize, the total will be about \$1.9 trillion short of a \$4 trillion target. This failure of the Super Committee and sequestration to put federal deficits on a sustainable path will likely roil financial markets and create additional uncertainty for businesses.

The hyper-partisanship in the Congress probably will not be eliminated by the current Congress and Administration. The 2012 elections will serve as a referendum on taxing, spending and Federal Reserve policies and may produce

a Congress that can come to grips with deficit problems facing the economy.

Exhaustion of Fiscal and

Monetary Policy Measures: Few fiscal and monetary policy measures remain available to stimulate the U.S. economy. The federal government probably could provide additional stimulus spending without hitting debt limits that would harm the economy. U.S. publicly held debt in 2011 was about 69 percent of GDP. In a study involving 44 countries over 200 years, economists Carmen Reinhart (Peterson Institute for International Economics) and Kenneth Rogoff (Harvard University) found that publicly held debt that exceeds 90 percent of GDP often produces slower median economic growth. The slower growth is associated in part with high interest costs associated with debt service.

According to the CBO, under current spending trends, U.S. publicly held debt would not reach 90 percent of GDP until about 2020, but several events could cause it to happen years earlier. Congress could extend the Bush tax cuts set to expire in 2013. Treasury borrowing costs could rise unexpectedly. European debt problems could spread, requiring additional budget outlays to bolster the U.S. economy. And a recession could reduce tax revenues. None of these are low-probability events. They caution policy makers against “kicking the deficit can down the road” for many years.

Even if it were safe to do so, Congress is reluctant to authorize additional stimulus spending because of questions about the effectiveness of the \$787 billion stimulus package passed in 2009. The Obama Administration promised that implementing the package would prevent U.S. unemployment from rising above 8 percent. Given how difficult it is

for an economy to recover from a deep financial crisis, it is doubtful whether the stimulus package had any chance of limiting unemployment to 8 percent. Other short-term stimulus measures apparently didn't do much to stimulate the overall economy either. Failure of stimulus packages to deliver expected results has poisoned the atmosphere in the Congress for additional stimulus spending.

In the aggregate, Fed policies have produced low interest rates in the United States for a prolonged period. While not described as such by the Fed, this is a de facto weak dollar policy that stimulates U.S. exports and discourages imports. This is probably one of the most important positive effects of Fed policy. U.S. current account deficits (mostly trade deficits) already have been reduced by this policy.

Overall, the headwinds will limit U.S. economic growth, making it difficult for the economy to sustain GDP gains much above 2 percent in 2012. However, only a sizable economic shock is likely to tip the U.S. economy into recession in 2012.

Economic Shocks

Economic shocks are difficult to forecast. However, the festering European debt crisis represents a big potential shock with a high probability of occurring.

Europe appears to be heading into recession in 2012. Greece and Portugal were already in recession in late 2011. Spain, Italy, and Belgium recorded little or no growth in the third quarter of 2011. Germany and France had 2 percent and 1.6 percent growth, respectively, in the third quarter of 2011. But France's economy appeared to be weakening in late 2011. The big question is whether the European recession will be deep or mild and manageable. A deep recession

would curtail U.S. exports since Europe is the destination for about 20 percent of U.S. exports. Three quarters of those exports go to the 17-country euro zone. U.S. banks also have some exposure to troubled euro zone debt.

Under a best-case scenario, the euro-zone will muddle through and patch together additional financial rescues for Greece, Italy and other countries. This would help to contain the European recession. Whether this happens depends heavily on the willingness of Germany—the euro-zone's strongest economy—to provide a large percentage of the needed rescue funds.

Over the longer-run, however, the euro-zone must change its financial institutions. A shared currency such as the euro cannot survive indefinitely when monetary policy is centrally-managed but each government decides how much to tax and spend. Greece's messy financial restructuring in 2011 and potential exit from the euro zone are instructive on this point. Moreover, for euro zone governments to obtain reliable, continuing access to capital, they'll need a form of collective insurance—probably a euro bond.

Unfortunately, reforms needed to put the euro-zone on a solid financial footing will be difficult to achieve. Germany will oppose making big additional outlays to rescue profligate neighbors. Furthermore, agreements needed to change financial arrangements in the European Union, including the halting steps toward centralized fiscal policy announced in mid-December 2011, will be difficult and time-consuming to implement.

Possible effects of a European shock on the U.S. economy were noted earlier. In addition, a major economic shock originating in Europe would increase the safe-haven value of the U.S. dollar in

foreign exchange markets, especially relative to the euro. This would lessen the effectiveness of the Fed's de facto weak dollar policy.

Farm Income

U.S. net farm income rose to a near-record \$100.9 billion in 2011, up 28 percent from 2010. Farm income will remain high in 2012 but decline modestly from 2011. If European debt problems do not push global markets into recession, agricultural exports again will be a strong engine for income growth in 2012.

The price of Deere and Co. stock—sometimes dubbed a “corn and soybean stock”—offers insights about the outlook for prices and incomes of crop producers. Deere stock prices also are sensitive to anticipated changes in net farm income. Deere stock prices peaked in April 2011 at over \$95 and trended downward to trade mostly around \$75 in November, foreshadowing some expected reduction in crop prices and U.S. net farm income in 2012.

High farm commodity prices and low interest rates have caused a sharp run-up in U.S. farmland prices. The Federal Reserve Bank of Kansas City reported that farmland prices rose 25 percent during the past year in several Midwestern and Western states. Farmland prices in Wisconsin were up 17 percent from year-earlier levels at the end of the third quarter of 2011. The run-up in farmland prices raises concerns about a farmland price bubble that could burst, producing a 1980s-type farm financial crisis.

But any widespread decline in U.S. farmland prices in the next year or two is unlikely to cause problems like those that emerged in the 1980s, in part because U.S. farmers are carrying lower debt loads in 2011. The estimated U.S. farm debt-

to-equity ratio in 2011 was 11.6 percent, matching the record low of 2007. Moreover, many farmers paid cash for farmland in recent years.

Outlook for U.S. Agricultural Trade

In its November 2011 Outlook for U.S. Agricultural Trade, USDA forecast that U.S. farm exports for fiscal year (FY) 2012 will total about \$132 billion, down \$5.4 billion from the FY 2011 total. In FY 2012, the U.S. agricultural trade balance is expected to remain strongly positive at \$26.5 billion but decline from \$42.9 billion in FY 2011. Agricultural imports are forecast to increase by \$500 million to \$105.5 billion in FY 2012, mainly because of larger imports of tropical products.

Lower soybean exports account for part of the decline in exports from FY 2011 to 2012. Oilseed product (mainly soybeans) exports are projected to be \$26 billion in FY 2012, down \$3.2 billion from FY 2011. The outlook for corn exports is murky. The USDA still forecasts corn exports of \$13.3 billion in FY 2012, up 3 percent from 2011. However, the USDA revised its corn export figure down from its August 2011 estimate. Several factors appear likely to depress corn exports further, including stronger competition from Argentina and the Ukraine. Exports for livestock and poultry products are forecast to show robust increases in FY 2012. U.S. dairy exports are projected to decline modestly to \$4 billion, but this would still put dairy exports near the record FY 2011 figure of \$4.5 billion.

Macro and Trade Policy Developments: Slower world economic growth also accounts for part of the expected decline in U.S. farm exports in FY 2012. However, the

decline will be cushioned by the Fed's de facto weak-dollar policy.

A few trade policy developments emerged in 2011 that will influence U.S. agricultural exports in 2012 and beyond:

- Congress approved bilateral free trade agreements (FTAs) with South Korea, Colombia, and Panama in 2011. The American Farm Bureau Federation estimates that U.S. farm exports will increase by \$1.8 billion per year under the U.S.-South Korea FTA. The U.S. International Trade Commission predicts that U.S. agricultural exports to Colombia will increase by \$170 million (24 percent) after full implementation of the FTA with that country.
- Efforts were re-started to create a nine-nation Trans-Pacific Partnership (TPP) in late 2011. The United States hopes to use the TPP to limit trade-distorting, government subsidies of state-owned enterprises such as those employed by China and Viet Nam.
- China increased tariffs on exports of U.S. chickens to China in retaliation for duties levied by the United States on tire imports from China. This largely closed the Chinese market to U.S. chicken exports, with a projected cost to the nation's poultry industry of about \$1 billion in 2011.
- A World Trade Organization panel ruled in favor of Canada and Mexico in a dispute over U.S. country of origin labeling (COOL) requirements for livestock and livestock products exported to the United States. It is unclear whether the U.S. will appeal the late 2011 WTO ruling. If the WTO ruling survives an appeal intact and the United States retains COOL requirements, this could lead to retaliatory tariffs on U.S. exports to Canada and Mexico.

Dairy Trade Developments: The growth of U.S. dairy exports is a noteworthy success story. Long a net importer of dairy products, the United States began recording dairy trade surpluses in 2007. In 2010 that trade surplus ballooned to \$1.5 billion. In part, the dairy trade surpluses reflect import substitution. The United States now produces more of the specialty cheeses once imported from Europe.

The recent record U.S. dairy exports are associated with longer-term gains in export market shares by U.S. firms. U.S. gains in market share for cheese, butter and nonfat dry milk during 2000 to 2010 are noted in the adjacent table. The U.S. has become one of the Big Four dairy exporters along with the EU-27, Australia (in decline as a dairy exporter) and New Zealand. Moreover, the United States is the only Big-4 country to show consistent gains in market share for all three products from 2000 to 2010.

The Bottom Line

On balance, the outlook for the agricultural economy and U.S. agricultural trade in 2012 is favorable. And U.S. agriculture will continue to perform better than the overall economy in 2012. Any indicator of a major deterioration in the outlook for U.S. agriculture in 2012 probably will have a “made in the euro zone” label attached.

| Dairy Product Export Market Shares for U.S. and Selected Other Countries | | | |
|--|--|-------|-------|
| Product & Country | Percent of Total World Dairy Product Exports | | |
| | 2000 | 2005 | 2010 |
| Cheese: | | | |
| U.S. | 4.4 | 4.7 | 12.0 |
| EU-27 | 45.2 | 40.3 | 42.6 |
| Australia | 20.9 | 18.3 | 12.1 |
| New Zealand | 23.7 | 21.4 | 20.9 |
| Others | 5.8 | 15.3 | 12.4 |
| Total (%) | 100.0 | 100.0 | 100.0 |
| Total (1,000 mt) | 1,068 | 1,238 | 1,363 |
| Butter: | | | |
| U.S. | 0.6 | 1.1 | 7.0 |
| EU-27 | 26.0 | 43.2 | 24.9 |
| Australia | 19.5 | 8.9 | 8.2 |
| New Zealand | 47.5 | 40.1 | 56.1 |
| Others | 6.4 | 6.7 | 3.8 |
| Total (%) | 100.0 | 100.0 | 100.0 |
| Total (1,000 mt) | 712 | 787 | 802 |
| Nonfat Dry Milk/SMP | | | |
| U.S. | 11.7 | 27.6 | 28.7 |
| EU-27 | 37.4 | 18.9 | 27.4 |
| Australia | 20.9 | 14.1 | 9.8 |
| New Zealand | 14.5 | 22.0 | 27.8 |
| Others | 15.5 | 17.4 | 6.3 |
| Total (%) | 100.0 | 100.0 | 100.0 |
| Total (1,000 mt) | 1,211 | 1,003 | 1,278 |

Source: USDA, FAS, *Dairy, World Markets and Trade*. EU-25 for 2000 and EU-27 for 2005 and 2010. Figures for 2010 are preliminary.

Farm Production Costs

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Production Inputs

The past three years have brought wide swings in the prices of key farm inputs. In 2008, prices for seed, fertilizer, diesel fuel and gasoline all increased substantially from the previous year. Seed and fertilizer prices rose largely because of strong demand—farmers raise more crops in response to high domestic and international market prices—as well as tight supplies. The prices of diesel fuel and gasoline rose as a result of a spike in crude oil prices in the third quarter of 2008.

Fertilizer prices rose in 2011 but remained below record 2008 prices. Nitrogen prices in 2011 were more than 40 percent higher than in 2010, but they were 22 percent lower than 2008 levels. Potash and phosphate prices in 2011 were up 20 percent from 2010, but only about half of what they were in 2008. Price trends indicate that fertilizer markets have adjusted to the major increase in demand for fertilizer from expanded crop acreage, mainly corn. Fertilizer supplies are better aligned with farmers' demand, which should help to stabilize or at least hold down price increases for nitrogen, potash and phosphate in the short run.

Seed prices have generally been on the rise since 2007. This mostly reflects rising demand as farmers around the world have expanded crop production. The price hikes also reflect improvement in seed qualities—they produce crops with better yields, pest resistance and drought tolerance. Improved seeds can command higher prices because they reduce farmers' other costs and increase profitability. The combination of improvements in seed quality, further concentration of the seed

| Year | Seed | Nitrogen | Potash and Phosphate | Diesel Fuel | Gasoline |
|------|------|----------|----------------------|-------------|----------|
| 2007 | 211 | 225 | 220 | 229 | 224 |
| 2008 | 275 | 398 | 674 | 371 | 264 |
| 2009 | 304 | 251 | 279 | 242 | 215 |
| 2010 | 284 | 234 | 316 | 303 | 244 |
| 2011 | 336 | 330 | 381 | 388 | 298 |

Source: USDA, NASS, *Agricultural Prices*.

industry and strong demand will all put upward pressure on seed prices. But if the costlier seeds lead to increased yields and reduced need for chemical pesticides, farmers will continue to use them.

Analysts in the U.S. Energy Information Administration (EIA) are forecasting modest declines in gasoline and diesel fuel prices in 2012. They base this on the assumption that use of petroleum products will decline modestly due to fears about weak global economic growth and that crude oil supplies will increase slightly from growth in non-OPEC production. But EIA tempers its optimistic forecast by pointing to considerable uncertainty about production the Middle East and North Africa that could put upward pressures on oil prices. Libya is a big source of this uncertainty. If Libya ramps up its oil production and exports sooner than anticipate, the additional supply on the world market could be sufficient to push oil prices downward. Alternatively, there could be upward pressures on oil prices if Libyan production does not come on line as planned, leaving world oil supplies tight.

Instability in the Middle East, particularly in Syria and Yemen, along with uncertainties about Iran, will also make oil markets jittery. Prices could change dramatically in anticipation of conflicts or diplomatic

actions that could disrupt the flow of oil from the Middle East. This political uncertainty will likely translate into instability in world oil prices.

Rents

Cash rents for farmland have risen dramatically in Wisconsin and neighboring states over the last five years. Wisconsin average cash rents climbed by about 38 percent, from \$72 in 2007 to \$99 in 2011. This surge in Wisconsin cash rents mirrors the situation in Illinois, Iowa and Minnesota. Average rents in those three states, which are dominated by cash grain operations, rose by 30 percent or more over 2007-2011.

The recent increases in cash rents in Midwestern states are mostly due to strong prices for corn, soybeans and other major field crops. Higher crop prices have boosted crop farmers' profits even after they paid much higher cash rents, and landlords are charging rents that better reflect those higher returns.

The recent escalation of cash rents is only sustainable if crop prices stay at or above current levels. History tells us that, barring an unexpected rise in the demand for crops or a major decline in global production, crop prices are likely to level off or decline modestly as supplies outstrip demand.

Recently, some landlords and tenants have entered into non-traditional cash/share lease arrangements known as flex-leases, which allow landlords to share in the higher revenues when crop yields or prices go higher than expected. Flex-leases are a hybrid of traditional cash leases, which yield predictable returns, and share leases, in which payments vary depending on yield, price and variable input costs. Flex-leases typically guarantee landlords a minimum return while providing them with opportunities to receive additional returns when prices are as high as they have been the last couple of years.

Landlords considering a flex-lease rental arrangement should recognize that they will be paying something for the opportunity to share in greater returns. The price for this upside opportunity comes in the form of a lower base or minimum rent than they would receive under a conventional cash lease. For example, a landlord entering into a flex-lease might agree to a minimum base rent of \$150 per acre on land that would rent for \$170 per acre under a conventional cash rent arrangement. This \$20 difference is the premium the landlord pays for the chance to share in any added revenue from price and yield gains.

The popularity of flex-leases or similar arrangements should increase if grain prices remain near current levels. If prices decline, landlords will likely revert to conventional cash rents that guarantee payments at fixed levels.

Credit Conditions

Bankers participating in the most recent agricultural credit survey conducted by the Chicago Federal Reserve Bank reported that credit conditions were stronger in 2011 than in the previous two years. Loan repayments were up and loan demand was down. This improvement in agriculture credit conditions

| Average Cash Rents for Farmland, Dollars per Acre | | | | |
|---|-----------|----------|------|-----------|
| Year | Wisconsin | Illinois | Iowa | Minnesota |
| 2007 | 72 | 141 | 150 | 94 |
| 2008 | 85 | 163 | 170 | 109 |
| 2009 | 87 | 163 | 175 | 113 |
| 2010 | 92 | 169 | 176 | 121 |
| 2011 | 99 | 183 | 196 | 135 |

Source: USDA, NASS.

is due largely to the higher earnings from stronger commodity prices during the last two years.

Thanks to higher farm incomes, loan repayments are up dramatically. During the third quarter of 2011, the Fed Survey loan repayment index was 133, meaning that 33 percent more bankers were reporting loan repayments to be up from the same period a year ago than were reporting lower repayments. This is markedly different from two years ago, when 11 percent more bankers were reporting lower repayment rates than were reporting higher. This jump in repayments indicates that farmers are using some of their newfound profits to retire debt.

Farmers are also borrowing less. In the July-September quarter of 2009, 5 percent fewer bankers reported increased demands for loans than were reporting decreased loan demand. In the same period of 2011, 19 percent fewer bankers were reporting more demand for loans than were reporting less. This drop

in loan demand suggests that farmers are financing their enterprises out of their operating profits.

A decrease in demand for farm loans should mean an increase in availability of funds to loan, and the Fed survey confirms that this is the case. In 2009 (July-September) 21 percent more bankers reported an increase in available loan funds than reported a decrease. In 2011 that margin had increased to 49 percent. Clearly, there is plenty of credit available for qualified farmers.

Credit is not only readily available, but also very affordable, because interest rates have remained quite low. Interest rates on farm operating loans were slightly above 6 percent in the third quarter of both 2009 and 2010. Due mainly to the Federal Reserve's quantitative easing in early 2011, interest rates on farm operating loans dropped below 6 percent. Interest rates are likely to remain low, but they're unlikely to drop further. The Fed has driven rates down about as low as possible.

| Agricultural Credit Conditions, July-September Quarter | | | | |
|--|-----------------------|--------------------|---------------------------|--------------------------------------|
| Year | Loan Repayment Index* | Loan Demand Index* | Funds Availability Index* | Interest Rate on Operating Loans (%) |
| 2009 | 89 | 95 | 121 | 6.17 |
| 2010 | 114 | 90 | 138 | 6.05 |
| 2011 | 133 | 81 | 149 | 5.66 |

*Index values are defined as the percent of surveyed bankers reporting an increase in indicator minus the percent reporting a decrease plus 100.

Source: Federal Reserve Bank of Chicago, *Ag Letter*, Nov. 2011

Dairy

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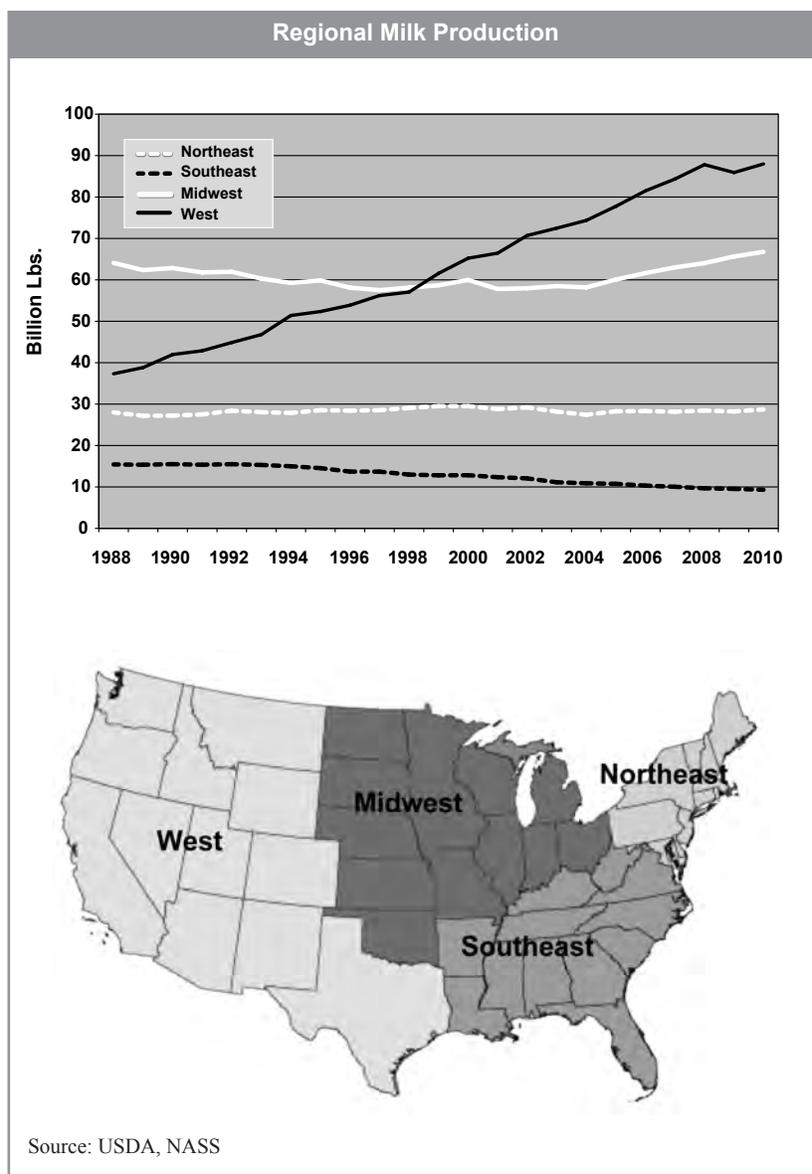
Current Dairy Situation

Milk prices showed considerable strength in 2011, recording the highest annual average milk price ever. The Wisconsin all-milk price averaged \$20.29 per hundredweight, which was \$4.11 per hundredweight better than last year and \$7 better than in 2009. Wisconsin's class III utilization dominates the federal order uniform price and would be expected to have the greatest impact on farm milk checks. Class III prices have averaged about 70 cents lower than class IV in 2011, but Wisconsin's all-milk price averaged 11 cents better than the U.S. all-milk price average. Clearly, milk supplies in the state were tight, leading processors to pay producers healthy premiums most of the year.

While all of this sounds like a banner year, keep in mind that feed prices were also extraordinarily high. For example, 2011 corn prices averaged about 60 percent higher than 2010 and nearly 30 percent above the previous high year in 2008. As a measure of farm well-being, the milk price-feed cost margin was fairly ordinary—and well below the high margins dairy farmers enjoyed in 2007 before dairy feed prices went on the rise.¹

Milk Supply

U.S. cow numbers contracted significantly in reaction to poor profitability in 2009. The size of the national herd stabilized in 2010 and increased about 0.9 percent in 2011. Currently, the nation has about the same number of dairy cows as it did in 2007. It is noteworthy that the



2009 contraction in both cow numbers and milk production occurred largely in the West. Production in the Midwest, Northeast and Southeast did not deviate from recent trends during 2009.

Milk production is determined by milk production per cow as well as by dairy cow numbers. In 2007, feed prices began to rise in tandem with corn prices, in part because of new demand for ethanol production.

Milk Price-Feed Cost Margin

| Year | Margin (\$/Cwt) |
|-------|-----------------|
| 2006 | 7.09 |
| 2007 | 11.12 |
| 2008 | 7.54 |
| 2009 | 3.54 |
| 2010 | 7.36 |
| 2011* | 7.30 |

*Through November.

¹This is the milk price-feed cost margin calculation suggested by National Milk Producers Federation and used in the language of the Dairy Security Act of 2011. The calculated margins assume that all feeds and forages for the dairy herd and replacements are purchased at market prices.

Feed prices peaked in 2008 and then moderated, but they seemed to have found a new and higher plateau. Milk per cow showed only modest gains from 2007 through 2009. However, genetic gains—the introduction of more productive cows to the herd—continued to accrue over that time period, and when milk prices increased somewhat in 2010 and feed prices moderated, milk per cow exploded to nearly 3 percent over 2009 levels. In 2011, feed prices were again much higher and productivity gains were modest. U.S. milk per cow increased only about 0.8 percent.

Total 2011 U.S. milk production was up 1.7 percent from 2010 to about 196.1 billion pounds. Wisconsin's milk production climbed steadily from 2005 through 2010, increasing from 22,085 million pounds in 2004 to a record 26,035 million pounds in 2010. Cow numbers started to increase in 2006, but in 2011, Wisconsin experienced only a slight increase in milk production, about 0.2 percent, the result of adding a scant 0.2 percent more cows and no increase in milk per cow. Milk per cow actually fell

below year-earlier levels during the hot and humid mid-summer weather.

Dairy Product Demand

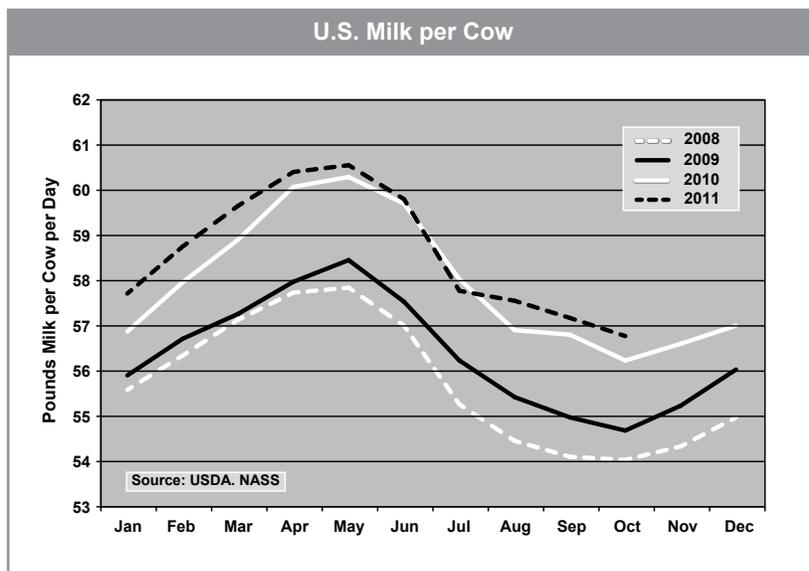
The landscape for dairy product demand keeps shifting. The 2008-09 recession and slow recovery took a toll on domestic demand for dairy products as well as export demand. Commercial disappearance, an often-used indicator of demand, is the amount of a product produced plus the change in inventory minus government purchases. It doesn't discriminate against domestic versus export sales, but it does tell us about total commercial sales of a product. For the most recent decade, commercial disappearance of cheese has increased at a compound annual growth rate of 2.33 percent. During the economic downturn of 2008-09 cheese grew at less than half that rate but, in 2011, we are on course to increase commercial disappearance of cheese at a nearly 4 percent rate.

Fluid milk disappearance is a different story. Per capita fluid milk consumption has been declining for many years after peaking in the

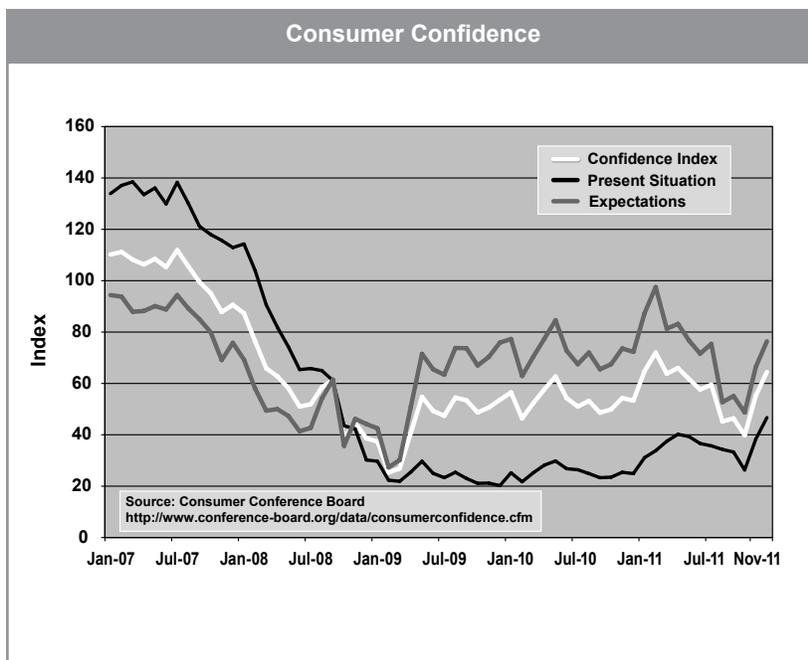
mid-1940s at more than 380 pounds. Today's consumption is less than half that amount. During the recent recession, fluid milk sales bucked that trend. It is conjectured that consumers reacted favorably to the lower retail prices for beverage milk. And since consumers were eating more meals at home, they were buying more milk for home consumption. Unemployment numbers have remained persistently high, but consumption of fluid milk declined about 1.5 percent in 2011.

The Consumer Confidence Index² declined during most of 2011, but rebounded in November and December. Consumers are clearly much less confident in the economy than they were before the onset of the recession in 2008. While most economists do not believe that we are facing a double-dip recession, consumers appear to be less convinced, with no strong trend in their opinions over the last three years.

Although some of the domestic sales prospects were not especially bright, exports were very strong in 2011. Export volume continues to grow and now accounts for 12–14 percent of U.S. milk production. Although we tend to export products tend to be relatively lower-value products such as dried whey, lactose and skim milk powder, cheese exports increased about 31 percent for the January through October 2011 period compared to the same period in 2010. As an example, the United States now provides about 45 percent of all of the cheese consumed in South Korea, and that may improve as a result of the recently ratified free trade agreement with that country. January through October exports of nonfat dry milk and skim milk powder were up 15 percent and butterfat was up 17 percent. The net trade



²The Confidence Index is the value most commonly referenced in the press. However, that index is constructed from both the Present Situation and the Expectations indices. Those indices are meant to reflect consumers' perception of the current economic condition and their expectation of their future economic situation respectively.



balance for U.S. dairy products is now positive by nearly a 2-to-1 margin. It is clear that the greatest opportunity for future growth in sales of U.S. milk and dairy products will come from export sales and the reduction of dairy product imports, not from dramatic changes in domestic consumption.

Dairy Stocks

Levels of dairy stocks act like the canary in the coal mine. They can expand or contract somewhat based on minor imbalances between supply and demand. Over the last few years, cheese and butter stocks have moved in opposite directions.

Through most of 2010 and the first half of 2011, butter inventories had shrunk to only about half of typical levels. This was in part due to strong demand, including exports, and lower butterfat tests in producer milk deliveries. It isn't clear why butterfat tests dropped, but hot weather and feed quality probably played a role. As 2011 progressed, butterfat yields returned to more normal levels and relatively high butter prices tempered demand.

Inventory levels are returning to more comfortable pipeline stocks as butter production is substantially above year-earlier levels.

The situation for cheese has been almost the opposite. In January, 2011 cheese inventories were 30 percent above typical levels. Stocks had built steadily over the last two years but, by the fourth quarter, they began to decline even though production continued at a normal rate. The drawdown of stocks is partly due to increased exports but also from stronger domestic use along with decreased imports of cheese.

2012 Dairy Outlook

Milk prices in 2012 will depend upon the level of both U.S. and overseas milk production, domestic sales of milk and dairy products and dairy export opportunities. Many countervailing factors influence our outlook for dairy prices this year, and one of them is the weather.

La Niña, a climate event caused by colder-than-normal waters in the eastern equatorial regions of the

Pacific Ocean, commonly occurs every three to five years. Last year, an unusually strong La Niña caused major flooding in Australia and severe drought in the southwestern United States. Although La Niña doesn't show up in back-to-back years very often, this event is forming again this year and will almost certainly prolong exceptional drought throughout most of Texas, Oklahoma and New Mexico in 2012. This has direct implications for dairy in that region and feed-stuffs for dairy cattle throughout the country.

It now appears that feed prices will remain relatively high in 2012, perhaps even higher than 2011. In the face of high feed prices, cow numbers may not increase and the increase in milk per cow will be dampened. USDA projects milk production to increase 1.2 percent in 2012. This would be bullish for milk prices.

With ample rains on their pastures, Australia and New Zealand finished their 2011 production season strong, and both countries are expecting increased milk production and exports in 2012. Exports from the European Union also were up significantly in 2011 and the EU is expected to increase milk production in the year ahead.

The sovereign debt crisis in the EU may have an impact on U.S. milk prices. As debt problems in Ireland, Portugal, Greece and Italy worry financial markets all over the world, repercussions will be felt here. Even though U.S. unemployment is high and our economic recovery is weak, the rest of the world still views the United States as a safe haven in uncertain times. Recently, investors have been putting their money into U.S. securities, which has strengthened the U.S. dollar against other currencies. This makes our dairy exports look relatively more expensive overseas.

During the global recession in 2008-09, we saw emerging economies like China, India and Mexico recover much more rapidly than developed countries. Their influence on worldwide dairy markets has been substantial. Although China is not the largest customer for U.S. dairy exports, it has important growth potential for us. Our newly signed free trade agreement with Korea also holds promise for increased exports. And, the recently settled dispute with Mexico regarding cross-border trucking on U.S. highways should help increase cheese exports to that country by lifting temporary tariffs on U.S. products.

As noted earlier, trade has become an important source of demand for U.S. dairy products, but feed prices have had a tendency to pull milk supplies in the opposite direction. Grain futures markets for corn and soybeans have moderated slightly from their high point in 2011. However, using futures market values for milk and feed prices would indicate weakening margins for 2012. Current price forecasts indicate that MILC payments would be made in several months of the year with the largest payment forecast for June.

Expect the Wisconsin all milk price to average about \$18.45 in 2012, about \$1.85 below the 2011 average. This is a point forecast and not a range estimate, but we believe that there is more upside potential around this value than downside.

A recent Rabobank report entitled “Where’s the Beef” outlines their forecast for a worldwide shortage of animal proteins. In the U.S., the extreme drought in Texas has caused heavy culling of beef cows and the calf crop is forecast to be short. There are other reasons for pork and

chicken shortages in other regions of the world, but their conclusion is that the forecast growth in animal protein production will only be about half of population growth. This suggests strong prices—unless the emerging economies falter and the sovereign debt problems of the European Union intensify. Milk proteins may prove to be good substitutes for meat proteins and, with an unusually large number of heifers in the pipeline, the U.S. dairy industry is in a good position to increase milk production—if the price is right.

2012 Milk and Dairy Product Price Forecasts

| | <i>Quarter</i> | | | |
|-------------|----------------|----------------|----------------|----------------|
| | <i>Jan-Mar</i> | <i>Apr-Jun</i> | <i>Jul-Sep</i> | <i>Oct-Dec</i> |
| Class III | \$16.90±0.10 | \$16.50±0.10 | \$17.00±0.05 | \$16.90±0.05 |
| Class IV | \$16.80±0.10 | \$16.90±0.10 | \$17.00±0.05 | \$17.00±0.10 |
| WI All Milk | \$18.65±0.15 | \$18.20±0.05 | \$18.55±0.05 | \$18.50±0.05 |
| Cheese | \$1.60±0.02 | \$1.62±0.08 | \$1.69±0.02 | \$1.69±0.01 |
| Butter | \$1.60±0.02 | \$1.62±0.08 | \$1.75±0.01 | \$1.76±0.01 |
| NFDM | \$1.41±0.03 | \$1.43±0.01 | \$1.36±0.01 | \$1.36±0.01 |
| Whey | \$0.66±0.01 | \$0.61±0.03 | \$0.54±0.02 | \$0.52±0.01 |

Source: Author’s forecasts.

Livestock and Poultry

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2011 in Review

Modest Increase in Meat Output in 2011

In the continuing environment of high and volatile feed costs, offset in part by stronger export markets, meat production managed to eke out an increase of less than 1 percent in 2011. Much, if not all, of the gain reflects a continued trend of small annual increases in the productivity of livestock and poultry producers. It was the 26th annual increase in meat production in the last 29 years, but meat output is still about 1 percent below the record high of 2008.

There were only small changes in the output of the various meat categories in 2011. Beef production has been flat at around 26 billion pounds for the past five years. Pork output was up about 1 percent after two years of small declines, but it was still about 3 percent below 2008's record of 23.3 billion pounds.

Broiler production squeezed out a 1 percent gain in 2011. Broiler output increased for 33 consecutive years from 1975 through 2008, but gains have been modest in recent years. Broiler output in 2011 set a new record of about 37.3 billion pounds, representing a gain of less than 6 percent during the last 6 years. Turkey production was up about 3 percent in 2011 but was still about 7 percent below the peak production year of 2008.

Cattle Inventory Decreased while Slaughter Increased

The 2011 total U.S. cattle and calf inventory in was down 1.4 percent

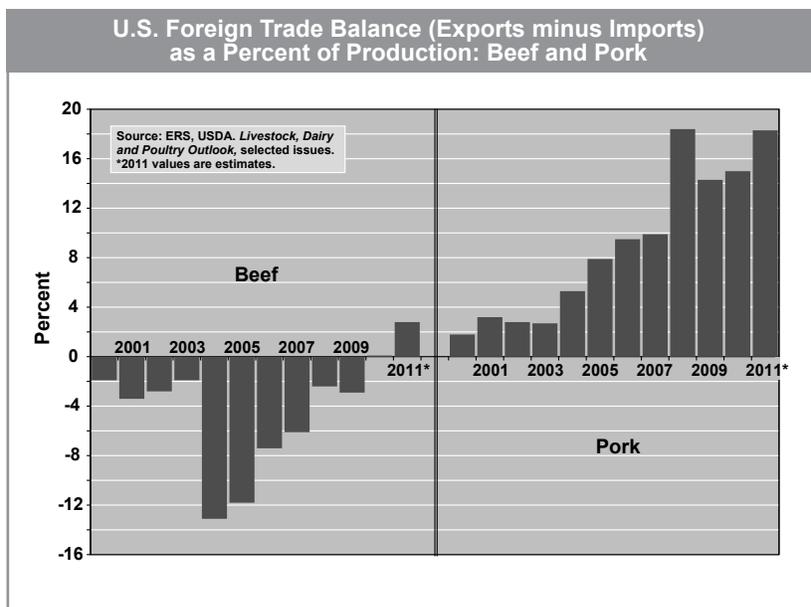
from 2010 and is now the smallest since 1958. U.S. cattle numbers have declined each year since 2007. They peaked in 1975. At the beginning of 2011, the number of beef cows was down 1.1 percent from 2010's level. National beef cow numbers have been essentially flat or declining in most states since 2001. One exception was Wisconsin, which gained 40,000 head since 2001 as beef cows replaced some dairy herds. Industry analysts had expected the U.S. beef cow herd to show signs of stabilizing in 2011 after several years of declines, but drought ruled out that possibility.

The number of cattle slaughtered in 2011 was about the same as in 2010, but the number of beef and dairy cows slaughtered was up about 5 percent. This is the highest total cow slaughter since 1996. Since the total beef and dairy cow inventory was down in 2011, the increased slaughter indicates that a greater percentage of cows was slaughtered. In the latter part of 2011, cow slaughter numbers began to decline slightly.

Exports Continued Strong in 2011

The meat export market continued strong in 2011. Beef exports rose 20 percent to nearly 2.8 billion pounds; six times what they were at the low point in 2004. Imports of beef totaled only about 2 billion pounds, down 45 percent since 2004.

For decades, beef imports exceeded beef exports, often by a wide margin. In 2010, the two were in balance. But, in 2011, beef imports dropped about 12 percent from the preceding year and were down 55 percent from 1994. Beef exports exceeded beef imports for the first time in decades, and by an impressive 700 million pounds. The switch from being a net importer to an exporter is mainly due to two factors. First, the weak U.S. dollar has made U.S. beef exports particularly attractive. Even Brazil imported U.S. beef. Second, the increased slaughter number of U.S. cows due to drought and other circumstances meant there was less need to import lean beef to blend for hamburger.



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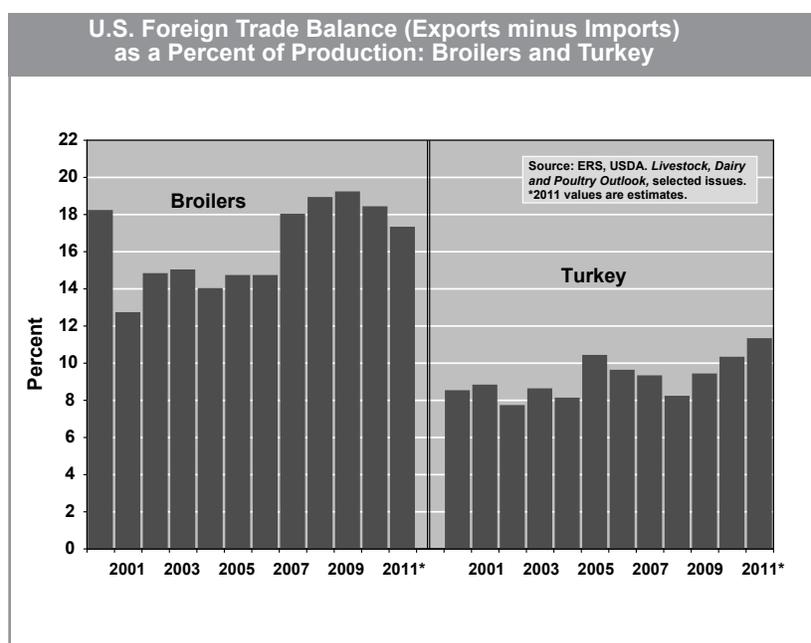
Pork exports continued to surge in 2011, rising nearly 20 percent to a new record of nearly 5 billion pounds. Pork exports represented about 22 percent of domestic pork production. After accounting for pork imports, which have been flat in recent years, net pork exports were over 18 percent of domestic pork output.

Broiler exports in 2011 continued flat in the 6.8 to 7.0 billion pound range for the fourth consecutive year. Turkey export volume was up about 13 percent in 2011 but was a little below the recent high reached in 2008.

Prices were Higher in 2011

Supported by strong export demand for beef and pork, cattle and hog prices saw double-digit increases in 2011 for the second year in a row. Prices of choice steers, feeder cattle and cutter cows were up about 20 percent over 2010 to reach record highs. Hog prices set record highs for every month during 2011. The record high for August 2011 of over \$76 per live hundredweight was double the August price of two years earlier. Lamb prices were even stronger, up 40 percent in 2011 following a 34 percent rise for the preceding year.

However, the average annual price of broilers in 2011, measured by the 12-city wholesale market was actually down a bit from 2010, and in fact was only several percentage points higher than in 2007. The export boom that helped propel cattle and hog prices didn't do as much for broilers. Most of the value of broilers is contained in the breast meat; but relatively small amounts of the high-value breast meat are exported compared with the more valuable cuts of beef and pork.



Turkey wholesale prices were up more than 10 percent in 2011 and were up more than 25 percent from two years ago.

Retail Meat Prices Higher in 2011

Consumers have felt some of the impact of the changing economic environment facing livestock and poultry producers in recent years. USDA estimates that 2011 beef prices were up 8.25 to 8.75 percent over 2010, while pork rose 8–8.5 percent and poultry was up 2.5–3 percent.²

2012 Forecast

Meat Production Lower in 2012

Meat production is expected to decline in 2012 for only the fourth time in the last 30 years. Volatile and rising feed costs in recent years and the severe drought in 2011 in many southern and southwestern states are likely to cause beef production to decline about 4–5 percent in 2012. This will more than offset small increases in the production of other meat animals and poultry.

Total meat output in 2012 is likely to fall about 2 percent below 2011. The projected decline in beef output would be the fifth largest annual percentage drop in the last 60 years (bigger ones include drops of 6.5 percent in 2004, 11.4 percent in 1979, 5.2 percent in 1974 and 6.3 percent in 1958).

Cattle Inventory will be Lower in 2012

The severe drought accelerated downsizing of the U.S. beef cow herd in 2011, and cattle inventory will continue to decline in 2012. USDA's January 2012 Cattle report will likely show the beef cow herd down by as much as 2 percent. Regional changes will continue as the cow herd will decline in some Midwest states where high grain prices are causing operations with both crops and cattle to reduce forage production and eliminate livestock to focus on selling grain. In 2012, Wisconsin will probably buck this trend and continue to expand its beef cow herd, as cattle are relocated from drought areas and beef

²ERS food price index forecasts for 2011 and 2012 are available at: <http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/Data/cpiforecasts.htm>

cows replace dairy cows on farms exiting dairying.

Cow culling in 2012 will drop dramatically, because the cow herd is relatively young in the wake of extreme culling in recent years. Even though fewer cows will be slaughtered, the size of the cow herd isn't likely to increase until 2014 or 2015.

Australia and Canada will begin increasing the size of their herds, which will increase pressure on exports. Growth of U.S. exports will also be constrained by a strengthening dollar, tight domestic supplies and high beef prices.

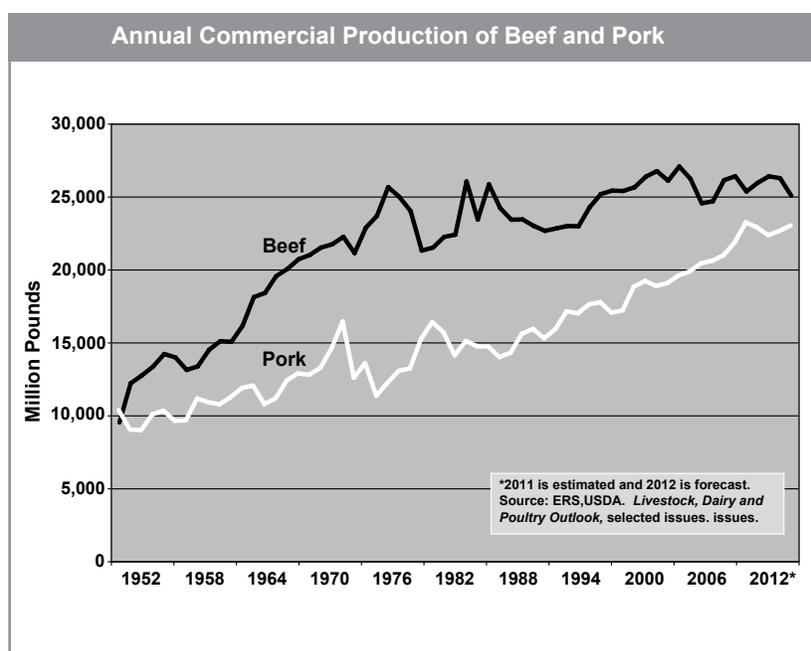
Feeder Cattle Price will Remain High in 2012

Cow/calf operators will see record returns in 2012. Calves and feeder cattle prices will likely start 2012 higher and finish the year flat or slightly above 2011 levels. Feedlot returns will remain negative in the face of high input prices and flat prices for finished cattle. Finished cattle prices will start 2012 approximately 10 percent higher than 2011 but will likely be only 1–2 percent higher at year's end.

Pork Production a Little Higher in 2012

The hog breeding stock is barely above year-ago levels, but given recent 1–2 percent annual increases in productivity, pork output is forecast to rise 2 percent, putting it above 23 billion pounds and only 8 percent below estimated beef output. Pork production has not been that close to total beef output in the last 59 years. As recently as 1975, pork production was only 48 percent of beef production.

In 2012, pork production will be 12 billion pounds greater than 1975. During the same time, beef production will be up only 1.4 billion pounds.



Can Hog Prices Rise for the Third Straight Year? Maybe, But Probably Not

Only once in the last 60 years has the average annual price of hogs risen three consecutive years, in 1999 to 2001, and then only by 2.5 percent in the third year. This happened after a disastrous 1998, when hog prices dipped into the teens at year's end.

After very strong increases of 34 percent in 2010 and about 20 percent in 2011, with retail pork prices at record highs and with so many people out of work, a third annual rise in 2012 is no certainty. With pork exports at record levels and less competition from beef expected, it is possible for hog prices to match or exceed the 2011 average in 2012. But it is difficult to go against 60 years of history. Odds seem to favor at least a modest decline in average hog prices in 2012.

Broiler Production Likely Down and Prices Up in 2012

Broiler prices have been disappointing and have not kept pace with cat

tle and hogs during the last three years. Average wholesale broiler prices in 2011 were about what they were in 2008. Meanwhile, choice cattle prices rose about 22 percent, hog prices rose about 36 percent and wholesale turkey prices were up 16 percent.

The relatively poor broiler performance since 2008 does not appear to have been caused by extreme overproduction. Broiler output rose about 1 percent from 2008 to 2011, while beef output dropped by 1 percent and pork production was down 3 percent.

The broiler industry has aggressively cut back eggs set and chick placements since May 2011. Decreases as high as 8–9 percent from a year earlier were recorded for a few weeks in September and October in an attempt to achieve better financial results. If the industry can trim production a bit in 2012 and there is less volume competition from beef, the annual average price of broilers is likely to rise slightly from recent disappointing levels.

Turkey Prices and Output Up Slightly in 2011

Turkey producers cut production by more than 9 percent in 2009 and have been able to maintain a very slow pace of production increases since then. They have been rewarded with double-digit annual price increases during the last two years. They have also been able to reduce frozen inventories to more normal levels. Expectations are for a very small increase in output and a very small increase in average prices in 2012.

Lamb Production to Fall Again

Lamb output has fallen each year for more than a decade and is down about 35 percent in the last 11 years. But domestic lamb consumption has nearly kept pace with population increases, thanks to large increases in imports during that time. There is little reason to expect any changes in these trends in 2012.

Egg Production Little Changed in 2012. Prices a Bit Higher

Egg output has been remarkably flat for years with output in 2011 down 1 percent from 2007 and down 4 percent from 2004. Prices within the year have been more volatile, as have year-to-year changes in annual average prices. After falling 20 percent in 2009, egg prices rose 3 percent in 2010 and 7 percent more in 2011. Another small rise is expected in 2012.

Exports will Continue Strong

Meat exports will remain strong in 2012 but they will likely be flat compared with 2011. The U.S. dollar is gaining strength against foreign currencies and will continue to do so as long as Europe has financial problems. Without the advantage of a weak dollar, beef importers will be looking to Brazil and Australia, especially if the Brazilian Real continues to decline against the U.S. dollar.

Meat Consumption Per Capita Down Again in 2012 to a 25 Year Low

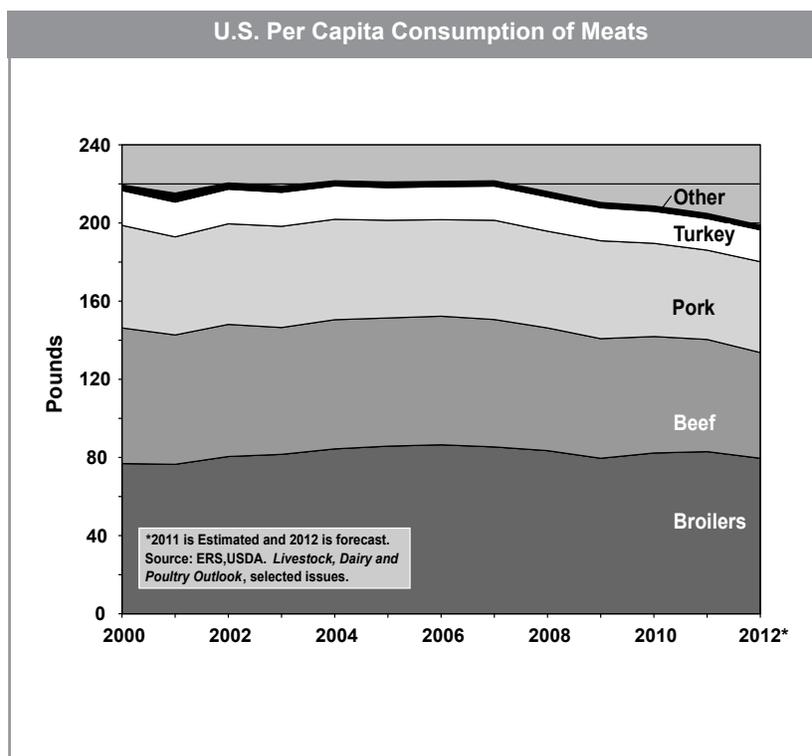
Per capita consumption is a good indicator of meat availability in the short run. But domestic per capita consumption is not the same as meat demand. Per capita consumption is calculated as meat production adjusted for two major factors—international trade and freezer stocks—divided by population. The U.S. population is increasing about 0.8 percent per year. Meat consumption per capita, including both red meat and poultry, has fallen more than 7 percent from the record set in 2007. Much of this decline in consumption is due to strong meat exports and a moderately increasing population, both of which are likely again in 2012. With a small decrease in meat production likely in 2012, per capita consumption could fall another 3 percent to about 199

pounds per person, dropping meat-consumption per person to the lowest level since 1987.

In those 25 years from 1987 to 2012, per capita consumption is estimated to have declined about 23 percent for beef and 6 percent for pork. In contrast, broiler consumption per capita will have risen about 43 percent and turkey consumption will have gone up 12 percent.

Retail Meat Price Higher Again in 2012

The price of meat at the retail level will rise again in 2012. ERS forecasts retail beef prices to increase by 4–5 percent, up about 17 percent in 3 years. Retail pork prices are expected to be up about 3–4 percent, about 16 percent higher than the low reached 3 years ago. Retail poultry prices are also projected to rise 3–4 percent in 2012, up about 5 percent from 2009.



Corn and Soybeans

David Moll (608-262-8916)

Synopsis

A strong bull market run in 2010-2011 set all-time records in corn futures prices, with soybeans trying to keep up. Wisconsin producers had high yields in both 2010 and 2011 and benefited from both back-to-back large crops and high prices. Does 2012 have the same momentum behind it?

The bull market began in July 2010 as demand-driven markets propelled prices upward. Demand from both domestic and foreign markets was picking up for wheat, corn and soybeans. World wheat supplies stumbled in the face of a devastating drought in the Black Sea region. Then, as the fall 2010 harvest unfolded, U.S. corn production failed to meet expectations, with producers harvesting a 12.4 billion bushel crop. Strong demand in 2011 ate away all but 1,128 million bushels of the available corn supply, a record-low ending inventory, resulting in a very tight 8.6 percent ending stocks-to-use ratio.

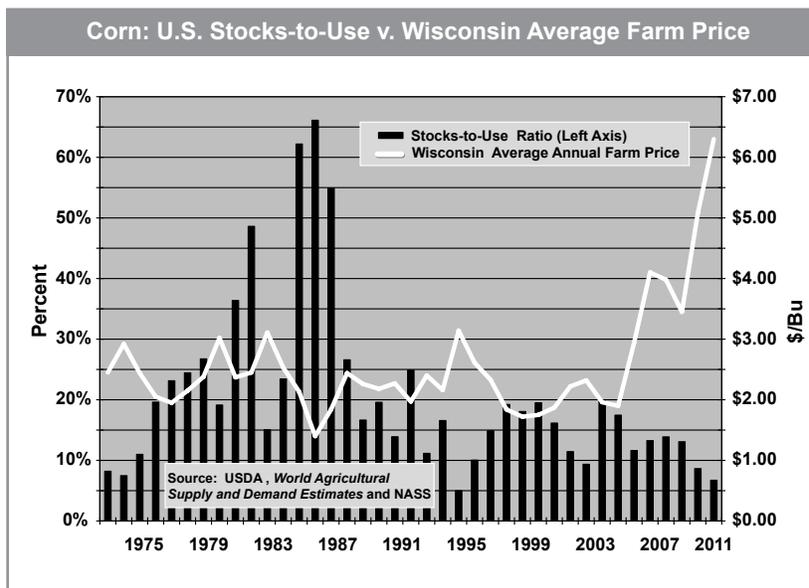
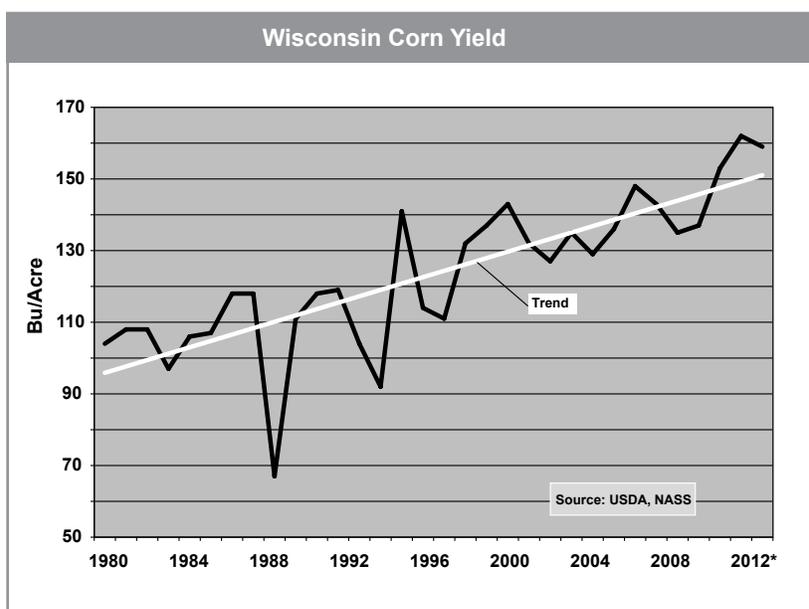
Planting intentions in early 2011 indicated there was a good chance to pick up more corn acres. But wet growing conditions in the eastern Corn Belt and some planting delays throughout the Midwest kept plantings below expectations at about 92 million acres. While that is the second-largest U.S. planted acreage ever, having even more corn acres could have softened the market by making overall supply less tight. USDA projects corn and soybean demand to remain strong in 2011/12, resulting in tight ending stocks again with corn at 848 million bushels and soybeans at 230 million bushels.

Low corn inventory and high corn prices could be huge factors in 2012. Heading into spring planting, if returns per acre this year remain substantially higher for corn than competing crops (mainly soybeans), additional acres will likely shift to corn. Given the current ratio of corn to soybean futures prices, that is a strong possibility. Nationwide, producers could surpass the record 93 million acres planted in 2007, perhaps planting as much as 94 or

95 million acres. While this would reduce the risk of market rationing in corn, such a large shift in acreage would put strong upward pressure on soybean prices.

Corn

Demand for corn remained strong in 2010/2011 for all three usage categories: feed and residual, ethanol and exports. This was the first crop year in which more corn was used



for ethanol than livestock feed. Ethanol demand remains strong primarily because of the federal Renewable Fuels Standard (RFS) and individual state blending mandates. The ethanol blender's tax subsidy expired at the end of 2011, but its expiration should have only minor affects on ethanol demand for corn.

The RFS and the state blending mandates have maintained demand for ethanol, but the market is close to meeting the 15-billion-gallon requirement for starch-based ethanol that the RFS calls for. Consequently, the amount of corn used for ethanol will continue to grow, but at a slower pace. Feed and residual demand is projected at 4.6 billion bushels in 2011/12, but it could go

higher if the economy improves and demand for meat strengthens.

Corn exports fell by more than 150 million bushels in 2010/2011. A weak dollar favored U.S. corn exports, but high corn prices more than offset that incentive. Keeping exports even modestly strong in 2011 was a challenge, given the tragic earthquake, tsunami and subsequent nuclear-plant meltdown in Japan. Japan historically has been the biggest customer for U.S. corn, taking approximately 35 percent of what we export. Through October, corn exports to Japan in 2011 were down 17 percent from the same period in 2010.

USDA forecasts that corn exports will fall to 1.6 billion bushels for the

2011/12 crop, the lowest level since 2002/03. Higher prices and a stronger dollar are the culprits.

The 2011 U.S. corn harvest was the fourth largest on record, with 91.9 million acres planted yielding a crop of 12.3 billion bushels. Wisconsin growers planted 4.1 million acres and harvested 524 million bushels. Wisconsin producers had another above-trend yield year in 2011 and, with high corn prices in 2010 and 2011, have had two outstanding years. Even though U.S. supplies were reasonably large, they were too small to allow the market to feel comfortable given total demand. This resulted in better-than-expected basis levels from the Wisconsin cash market; almost 50 cents per bushel stronger than 2010.

U.S. Corn Balance Sheet (Sep–Aug)

| Marketing Year | 04/05 | 05/06 | 06/07 | 07/08 | 08/09 | 09/10 | 10/11* | 11/12** |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|---------|
| Million Bushels (Except as Noted) | | | | | | | | |
| Beg. Stocks | 958 | 2,114 | 1,967 | 1,304 | 1,624 | 1,674 | 1,708 | 1,128 |
| Imports | 11 | 9 | 12 | 20 | 14 | 10 | 28 | 15 |
| Acres Planted (Mil.) | 80.9 | 81.5 | 78.3 | 93.5 | 86.0 | 86.5 | 88.2 | 91.9 |
| Acres Hvst. (Mil.) | 73.6 | 75.1 | 70.6 | 86.5 | 78.6 | 79.6 | 81.4 | 83.9 |
| % Harvested | 91.0 | 92.1 | 90.2 | 92.5 | 91.4 | 92.0 | 92.2 | 91.2 |
| Yield (Bu./A.) | 160.4 | 148 | 149.1 | 150.7 | 153.9 | 164.7 | 152.8 | 146.7 |
| Production | 11,807 | 11,114 | 10,535 | 13,038 | 12,101 | 13,110 | 12,447 | 12,310 |
| Total Supply | 12,776 | 13,237 | 12,514 | 14,362 | 13,739 | 14,792 | 14,262 | 13,453 |
| Feed & Residual | 6,158 | 6,155 | 5,595 | 5,913 | 5,254 | 5,159 | 4,792 | 4,600 |
| Food/Seed/Industrial | 2,686 | 2,981 | 3,490 | 4,387 | 4,953 | 5,938 | 6,428 | 6,405 |
| Ethanol | 1,323 | 1,603 | 2,119 | 3,049 | 3,677 | 4,568 | 5,021 | 5,000 |
| Exports | 1,818 | 2,134 | 2,125 | 2,437 | 1,858 | 1,987 | 1,835 | 1,600 |
| Total Demand | 10,662 | 11,270 | 11,210 | 12,737 | 12,065 | 13,084 | 13,054 | 12,605 |
| Ending Stocks | 2,114 | 1,967 | 1,304 | 1,624 | 1,674 | 1,708 | 1,128 | 848 |
| Stocks to Use (%) | 19.83 | 17.45 | 11.63 | 12.75 | 13.87 | 12.95 | 8.64 | 6.73 |
| Average Farm Price (\$/Bu.) | \$2.06 | \$2.00 | \$3.04 | \$4.20 | \$4.06 | \$3.55 | \$5.18 | \$6.40 |

Source: USDA, *World Agricultural Supply and Demand Estimates*
 *USDA Estimate as of December 2011
 **USDA Forecast as of December 2011

For the second straight year, ending stocks are forecast to be close to the smallest on record—848 million bushels for the 2011/12 crop year. This translates to an ending stocks-to-use ratio of 6.7 percent. Over the last 40 years, ending stocks have only been this tight in the mid-1970s and 1996. In the mid-1970s ending stocks were tight for two years before demand fell off. How long ending stocks will remain tight for this run is an open question.

USDA projects an average U.S. corn price of \$6.40 per bushel for the 2011/12 marketing year. This would set a new record, eclipsing the previous record, set in 2010/11, by more than \$1.20 per bushel. That U.S. price would translate to a Wisconsin season average price for 2011/12 of about \$6.25 per bushel.

The futures market is signaling that it will pay a premium of 3 cents per bushel for storage into July 2012. This is not enough to cover the cost of commercial storage or even on-farm storage for most producers. However, given the strong basis levels, storing grain with the basis unlocked will be a riskier bet this year. With attractive futures prices and a larger-than-normal downside risk in prices, it may make sense to lock in bids for forward-delivering the remainder of the crop. Much depends on how much risk one is willing to take.

Soybeans

Overall, soybean prices were high in 2011, but they struggled to keep pace with climbing corn prices. As the year unfolded, the market held within a range of \$12 to \$14 per bushel. The year ended up with five tops and 5 bottoms creating the range, a rare occurrence. This phenomenon probably reflects soybean production coming from both American hemispheres, the opportunity to double-crop in the United States and

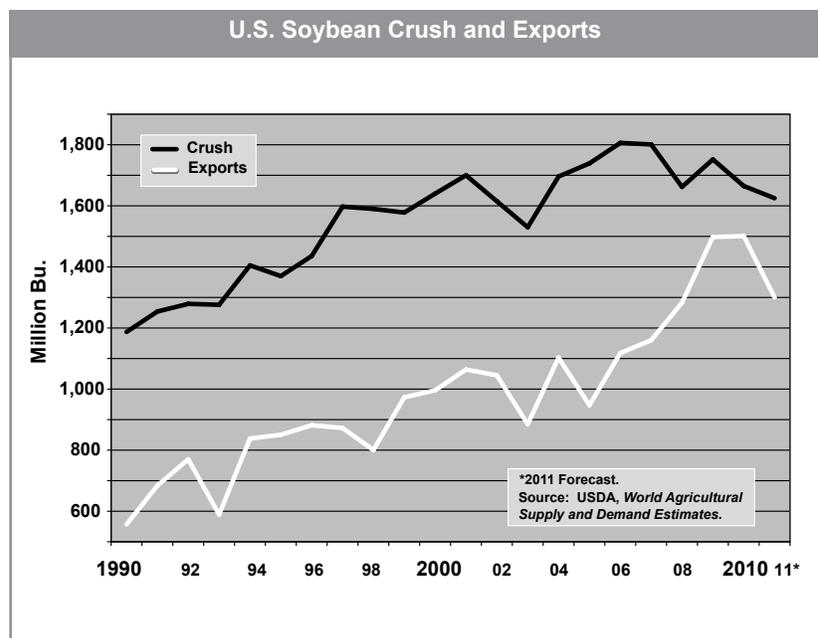
the prospect of a potential drop in demand due to lagging economic growth in major importing countries. Soybean users are not forced to buy extra production for insurance, because more production can come to the market quickly.

U.S. soybean crush should remain strong in 2012, as hog producers are expected to have a profitable year. Poultry production continues to grow at an impressive pace, and this growth should extend to 2012. Soybean oil usage also remains strong with more biodiesel production expected. But soybean oil exports are expected to slip, so soybean oil prices are expected to remain near last year's price of 52 cents per pound.

Exports drive soybean prices, and exports have shown substantial growth. But high prices and a strong dollar are expected to reduce U.S. exports by 200 million bushels in 2011/12. About 1.3 billion bushels of soybeans are expected to be exported with 60 percent of that heading to China. China continues to offer a great export opportunity for U.S. soybeans, but an increas-

ingly risky one. China has made major investments in South American infrastructure to improve their supply chain for soybeans. South American production could see record production again this year, with many more acres planted. This will likely set the tone for U.S. price expectations and soybean plantings in 2012. If South America has a disappointing harvest, then soybean prices should move higher, improving U.S. soybean returns and encouraging producers to plant more acres

U.S. soybean production in 2011 was 3.05 billion bushels, down nearly 300 million bushels from 2010. The crop came from 73.7 million harvested acres. Wisconsin growers planted 1.63 million acres and harvested 1.6 million acres, producing a crop of 72.5 million bushels, down 7 million bushels from 2010. At 47 bushels per acre, yield was well above the long-term trend but 3 bushels per acre below the 2010 record yield. Wisconsin soybean prices for 2011/12 should average about \$11.50 per bushel, 20 cents under the projected U.S. average.



U.S.Soybean Balance Sheet (Sep–Aug)

| <i>Marketing Year</i> | <i>04/05</i> | <i>05/06</i> | <i>06/07</i> | <i>07/08</i> | <i>08/09</i> | <i>09/10</i> | <i>10/11*</i> | <i>11/12**</i> |
|--|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------------|
| Million Bushels (<i>Except as Noted</i>) | | | | | | | | |
| Beg. Stocks | 112 | 256 | 449 | 574 | 205 | 138 | 151 | 215 |
| Imports | 6 | 3 | 9 | 10 | 13 | 15 | 14 | 15 |
| Acres Planted (Mil.) | 75.2 | 72.0 | 75.5 | 64.7 | 75.7 | 77.5 | 77.4 | 75.0 |
| Acres Harvested (Mil.) | 74.0 | 71.3 | 74.6 | 64.1 | 74.7 | 76.4 | 76.6 | 73.7 |
| % Harvested | 98.4 | 99.0 | 98.5 | 99.0 | 98.7 | 98.5 | 99.0 | 98.3 |
| Yield (Bu/A) | 42.2 | 43 | 42.7 | 41.7 | 39.7 | 44 | 43.5 | 41.3 |
| Production | 3,124 | 3,063 | 3,188 | 2,677 | 2,967 | 3,359 | 3,329 | 3,046 |
| Total Supply | 3,242 | 3,322 | 3,647 | 3,261 | 3,185 | 3,512 | 3,495 | 3,275 |
| Crush Sep/Aug | 1,696 | 1,739 | 1,808 | 1,803 | 1,662 | 1,752 | 1,648 | 1,625 |
| Exports | 1,097 | 940 | 1,116 | 1,159 | 1,283 | 1,501 | 1,501 | 1,300 |
| F/S/R | 192 | 194 | 149 | 93 | 101 | 108 | 130 | 120 |
| Total Demand | 2,986 | 2,873 | 3,073 | 3,056 | 3,047 | 3,361 | 3,280 | 3,080 |
| Ending Stocks | 256 | 449 | 574 | 205 | 138 | 151 | 215 | 230 |
| Stocks to Use (%) | 8.57 | 15.62 | 18.28 | 6.71 | 4.53 | 7.01 | 6.55 | 7.55 |
| Average Farm Price (\$/Bu.) | \$5.74 | \$5.66 | \$6.43 | \$10.10 | \$9.97 | \$9.59 | \$11.30 | \$11.70 |

Source: USDA, *World Agricultural Supply and Demand Estimates*
 *USDA Estimate as of December 2011
 **USDA Forecast as of December 2011

Summary

Marketing grain in 2012 will be challenging. With tight ending stocks, there is considerable upside potential in corn and soybean prices in 2012. But tight ending stocks also mean that even small changes in underlying fundamentals can cause prices to drop quickly and sharply. In years when yields fall below trend line the highest seasonal prices have historically been observed during August through January. These high prices ration demand and usually lead to much lower prices in the spring when enough rationing has occurred. Whether that happens in 2012 remains to be seen.

As input prices continue to rise, protecting against downside risk while leaving room for upside potential will be a difficult balancing act. If

demand weakens and supplies are ample, we could see prices take a very different direction. As recently as July 2010, corn prices were barely above \$3 per bushel and the bottom did not appear to have much support. This was after the 2008 bull market rally brought prices above \$7 per bushel. We're not likely to see \$3 corn in the next year, but some price deterioration is quite possible.

The drought in Texas has triggered pessimistic predictions about 2012 corn production in the south. If the drought conditions spread to the Midwest, all bets are off on how high prices would go. Commodity futures prices would likely set new all-time highs.

When marketing the rest of the 2011 crop and making contracts for the 2012 crop, producers need to con-

sider their financial position and how much downside price risk they can tolerate. While the price outlook is bullish, history shows that bulls often die quickly. When fundamentals change, prices are typically pushed down sharply as supplies exceed demand.

Margins will likely be tight in 2012 and perhaps even tighter in subsequent years as landlords and input suppliers attempt to pick up a larger share of the profits enjoyed by corn and soybean growers over the last two years. Even if corn and soybean prices remain high, input prices will likely rise at an even faster rate. The back-to-back high yields and prices seen of the last two years have been really good times, but all good times come to an end.

Fruits and Vegetables

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Synopsis

Wisconsin cranberry production increased 10 percent in 2011 compared to 2010 and 2009. Carryover of 4.08 million barrels from 2010 and a large 2011 crop has resulted in lower prices again. Lower prices following the 2010 crop increased demand, decreasing the carryover into the current crop harvest. Despite the decreased carryover, Wisconsin cranberry growers are expected to see further price suppression.

Growers increased planted acreage of potatoes in 2011 from the previous year across the country, but challenging growing conditions reduced anticipated yields. Along with strong demand this resulted in good prices. Movement of Wisconsin fresh market potatoes has been strong, and grower return has been good. Contracted acreage for processing vegetables was down in 2011 from the previous year, because strong futures prices for field corn and soybean encouraged planting of those crops instead.

Fruit Crops

Fruit producers enjoyed much more favorable growing conditions in 2011 than they had in 2010. Although the spring was cool, there were few frost events, which allowed for good pollination and fairly good yields and quality.

Cranberries

The USDA estimates 2011 Wisconsin cranberry production at 4.3 million barrels (1 barrel=100 lbs.), up 9 percent from 2010. The

national forecast is 7.5 million barrels, up 10 percent from 2010. If realized, this would be the second-highest production ever. Wisconsin is predicted to produce 57 percent of the United States cranberry crop making Wisconsin the top producer of cranberries for the 17th consecutive year.

Carryover going into the fall of the 2011 marketing season was 4.08 million barrels, down nearly 11 percent from 2010/2011. Large supplies last year suppressed prices, helping to increase consumption and pulling down carryover volumes. Current carryover is still higher than desired, leading to an anticipated price of \$44.70 per barrel, down \$1.80 from 2010/2011.

Tart Cherries

The 2011 tart cherry crop was estimated at 8.7 million pounds, a 53 percent increase over 2010. A wet and cool spring led to extended bloom period, but allowed for successful pollination. The crop was picked before the first frost, also contributing to improved production in 2011.

Apples

The Wisconsin apple crop in 2011 was about 43.8 million pounds, about 16 percent higher than 2010. Increased yields were due in part to fewer problems with frost in the spring compared to 2010 and favorable production conditions, especially timely rains in July and August. Some hail damage affected the crop in early spring, but the subsequent favorable growing season improved overall fruit quality.

Vegetable Crops

Cold and wet weather delayed planting of potatoes and early sweet corn

in 2011. A cold June hindered early growth of many vegetable crops before weather turned warm during July. The potato crop ended up with lower yields, smaller average tuber size and low specific gravity. Yields of processing vegetables were low for early-planted crops, but good to excellent for late-planted crops.

Potatoes

Wisconsin potato growers harvested 62,000 acres in 2011, up 500 acres from 2010. Harvested acreage has been steady at about this level for the last four years, but it is down sharply from the 84,000 acres harvested in 2004. Higher yields through 2009 have offset part of the acreage decline, so that total production had not been down much compared to the early part of the last decade. National supply management has improved wholesale fresh market potato prices across the country over the last several years. Wisconsin fresh market potato growers have received \$1 to \$1.50 per hundredweight more than growers from other states during that time.

The total crop production in 2011 was 22.3 million hundredweight, representing the lowest total potato production in Wisconsin since 1992. The 2011 Wisconsin crop was 8.1 percent smaller than 2010 despite slightly more acres harvested. The reduced production was due to drop in average yield to 350 hundredweight per acre, about 8.9 percent less than in 2010. Potato planting was the latest that most Wisconsin producers could remember. Rain fell on 17 of the last 20 days of April throughout most of the state's potato production regions, making planting nearly impossible. Planting was not completed until well into May, and

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the potato crop did not emerge until June. June was cold with few nights above 40 degrees, leading to slow early-season growth and delayed tuber set. Potato tubers initiated the last week of June or early July, just in time for one the hottest months in potato-growing areas of Wisconsin in recent years. Hot weather during early tuber bulking decreased potato quality and volume in several ways. It reduced dry matter or specific gravity, increased sugar content and related poor fry color, and decreased days for tuber bulking, limiting yields and reducing tuber size relative to recent years.

Even though the season brought considerable rain, the crop didn't have the same disease pressures as in 2010. To date, the stored crop appears to have relatively few signs of disease problems. High sugars have led to dark fry color in chip and processing potatoes, presenting substantial challenges to storage managers of chip and processing potatoes. To counteract the sugars, storage managers are storing chip and processed potatoes at warmer than desired temperatures, which increases shrink and increases the risk of disease.

Sweet Corn

Wisconsin producers harvested 66,000 acres of sweet corn in 2011, 12,000 fewer acres than in 2010. Total production was estimated at 522,000 tons, down 12 percent from 2010. This continues a decline in production from 2009, mostly because there were fewer contracted acres in 2011. A warm July provided good growing conditions for sweet corn, leading to good yields for late-planted crops. But cool temperatures in May and June damaged stands and limited yields of supersweet hybrids.

Snap Beans

Wisconsin snap bean production was contracted on 66,400 planted

| Wisconsin Potatoes (All Uses) and Vegetables for Processing, 2011 | | | |
|--|--------------------------------|----------------------|-------------------------------|
| Crop | Production (1,000 Tons) | | Wisconsin as % of U.S. |
| | Wisconsin | United States | |
| Fall Potatoes | 1,116.5 | 21,207 | 6.6 |
| Sweet Corn | 522.6 | 2,640 | 19.8 |
| Snap Beans | 258.3 | 656.3 | 39.4 |
| Carrots* | 73.6 | 321 | 22.9 |
| Green Peas* | 85 | 358.7 | 23.6 |
| Cucumbers* | 27.2 | 549.6 | 4.9 |
| Onions | 29 | 3,760 | 0.8 |

*Value for 2010 from Wisconsin Agricultural Statistics, 2011. Other values from USDA, NASS.

acres in 2011, 12,300 fewer acres than 2010. Nationally, snap bean contracted acreage was down more than 10 percent. Snap bean harvest was 50,000 tons lower in 2011 than 2010, continuing a downward trend over the past four years. Yields were good to excellent for early and late-planted snap beans. The reduced production was due to fewer planted acres.

Green Peas

Wisconsin farmers planted 33,300 acres of green peas in 2011, down nearly 8,000 acres from 2010. Average forecast yield was just over 2 tons per acre, leading to statewide production of 66,000 tons. Production was down almost 20 percent due to decreased acreage under contract. Cool conditions in May and June allowed for good early pea production, but hot July conditions reduced yields and quality of late-harvested crops.

Cucumbers

Wisconsin growers planted 5,600 acres of pickling cucumbers in 2011, down 600 acres from 2010. Colder than normal temperatures in June delayed harvest of the early-season crop, but a warm July promoted rapid growth and a good yield and quality in late planted cucumber. Downy mildew pressure was low, which meant fewer disease management challenges for cucumber growers.

Cabbage

Wisconsin farmers produce fresh market cabbage in the southeastern and south central regions of the state, while cabbage is grown for sauerkraut in counties surrounding Oconomowoc, the home of Great Lakes Kraut. Wisconsin produces more cabbage for kraut than any other state. Black rot continues to be a serious production challenge for Wisconsin's cabbage industry. Losses in 2011 were not as severe as last year, but still substantial. This is due in part to wet growing conditions, but short rotations exacerbate the problem.

Onions

Wisconsin farmers were expected to harvest 1,400 acres of onion in 2011, down at least 200 acres from 2010. Average yield was estimated at 415 hundredweight, which is substantially up from 2010. The weather in 2011 was better overall for onion production because of less flooding and consequent improvement in quality and reduction in post-harvest losses. Prices and market demand have been strong so far in the fall of 2011.

Fresh Market Vegetable Production

The number of fresh market vegetable farms in Wisconsin has increased in recent years. This is in part due to increasing demand for fresh and locally grown produce.

In addition, farmers with small acreages are using their land as a business opportunity and producing vegetables for local sale and marketing. There are an estimated 2,500 fresh market vegetable farms in Wisconsin.

Wisconsin fresh market vegetable farms planted 6,700 acres of fresh market sweet corn in 2011. This was a decrease of 800 acres from 2010. This decrease was likely due to decline in planting of sweet corn for wholesale production, not a decrease in the number of direct market vegetable farms.

Focus on Wisconsin's Apple Industry

Apple production has long been an important part of Wisconsin's agricultural economy and continues to play a role in connecting the state's consumers with its food producers.

The apple, which is native to Kazakhstan, found its way to the Midwest around 1880 by way of settlers who established apple trees in almost every homestead, partly aided by the efforts of John Chapman, or as most know him, Johnny Appleseed. Over time, commercial growers have done a remarkable job of keeping Wisconsin supplied with the best heirloom varieties while also staying up to date with the latest releases of popular new apple varieties.

The commercial apple industry started in the early 1900s as growers selected some of the best varieties and began to propagate and cultivate the crop for sale. Apple orchards can be found in every region of the state, from the northern towns of Bayfield and Shell Lake to the Southern region of Kenosha. When USDA-NASS started collecting data on apple production in 1964 there were 8,700 acres in production. Since then, acreage has fallen by more than half to just over 4,000 acres. Total apple production has also

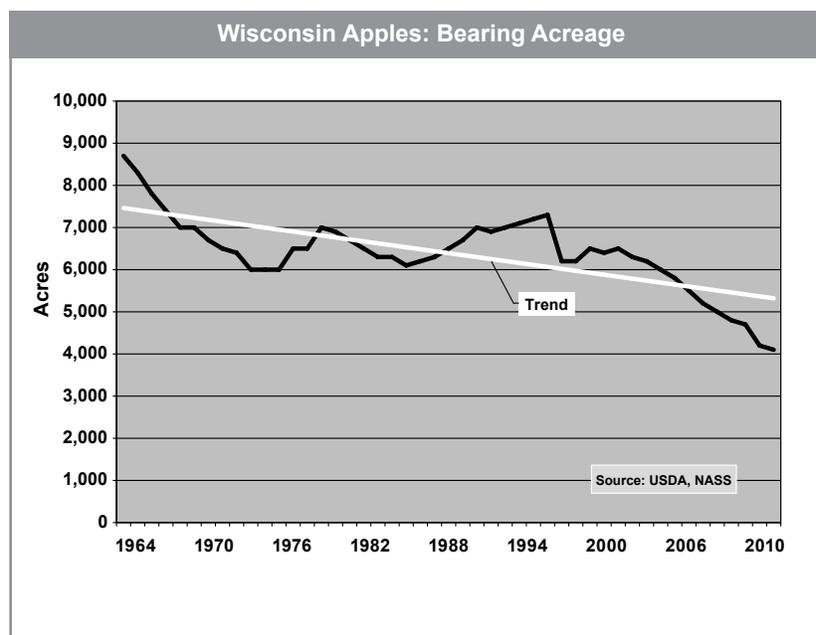
decreased, but not at the same rate as acreage, because yields have improved. Improvements in cultural practices, the use of dwarfing rootstocks and high-density planting systems have helped increased production per bearing acre by 2,000 pounds since 1964.

Over the years, apple production has become increasingly complicated, competitive and costly. To be successful, today's growers must have extensive knowledge about the life cycles of numerous pests and be able to carefully monitor environmental conditions and pest populations, often using sophisticated computer models to determine potential infection periods. Wisconsin apple growers have been very successful in acquiring this expertise and technology and finding other ways to improve efficiency and profitability—notably, integrating value-added activities into their operations.

All fruit growers face challenges of increased costs, but apple producers have the added challenge of keeping up with changes in consumer preferences for various apple varieties. Consumers purchase by variety and

varieties in highest demand change over time. As a result, the value of a specific apple can change quickly. This means that growers must try to anticipate which varieties will become the new hot sellers and to establish plantings of those varieties early enough to benefit.

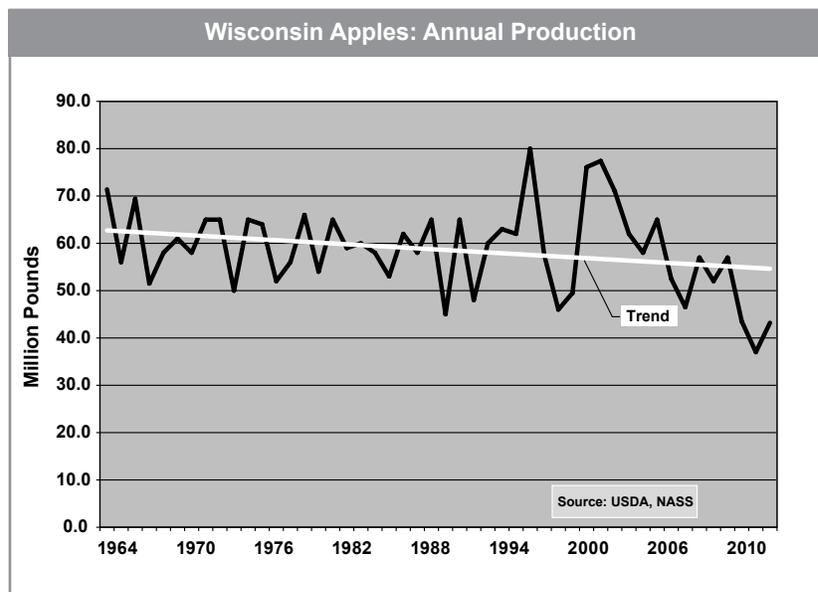
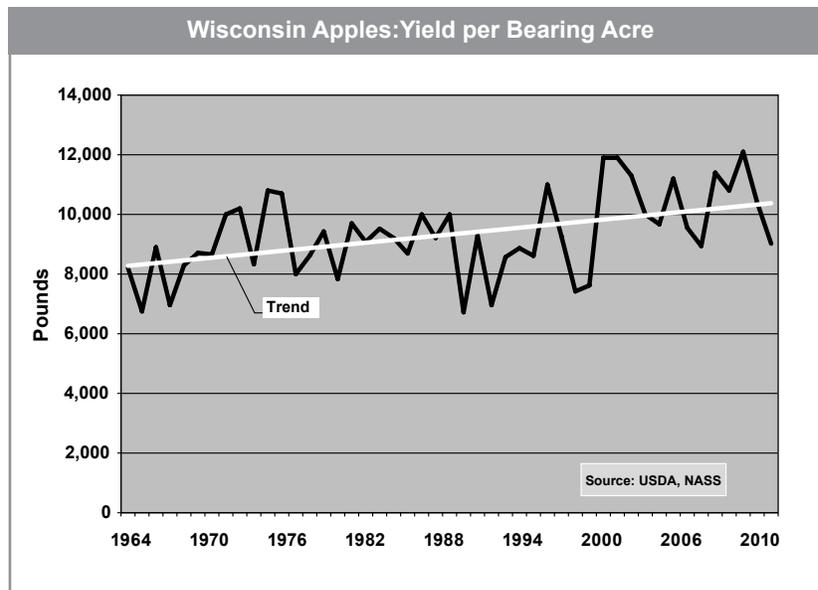
It can take several years after planting freestanding semi-dwarf apple trees before a crop can be harvested. Growers can reduce this planting-to-harvest interval to two years by establishing a high-density system of dwarf trees grown on a support structure. This, however, requires a substantial capital investment. Some growers have opted to make this investment, upgrading their orchards to high-density production so that they can meet the demand of the wholesale market and respond more quickly to consumers' changing variety preferences. Some growers are also joining together in cooperatives to help meet the volume requirements of very large retailers. Since it is more difficult for smaller orchards to change varieties, these producers tend to rely more heavily on direct marketing of traditional apple favorites.



Another recent challenge for growers is that breeders and propagators sometimes release new varieties restrictively in order to maintain quality control and manage supply. As a result, not all growers have access to the new varieties. The industry has been engaged in legal discussions as it struggles to resolve this problem.

Despite the challenges, Wisconsin's apple industry remains strong and growers are devising new strategies to remain profitable. Growers who sell to wholesalers are increasing production and investing in high-density planting systems to increase efficiency and quality. Many smaller growers continue to produce on older trees but have been able to increase profitability by producing added-value products such as cider and baked goods. Some are offering a combination of produce and rural experiences, such as petting zoos and hayrides, to attract customers.

The state's apple orchards have always helped provide a direct connection between consumers and producers. Generations of state residents have made it an autumn tradition to visit orchards to harvest fruit and enjoy the beauty. This connection has become more important in recent years as a growing segment of the population has relatively fewer opportunities to meet the people who grow their food. As Wisconsin's apple industry continues to adapt to meet new challenges, it will continue to provide Wisconsin with excellent produce and a connection to agriculture.



III. Special Article:

The 2012 Farm Bill: What Can We Expect?

Introduction

Traditionally, in a year in which we expect to begin a new federal Farm Bill cycle, the authors of *Status of Wisconsin Agriculture* have included a special article on what's in store for the new version of this omnibus legislation, which authorizes USDA farm, food, rural development and other programs for the following five years. By this point in the cycle, Congress has normally made sufficient progress on the farm bill to allow our market analysts to provide reasonably confident insights on what the bill will contain and the likely impacts of new programs on Wisconsin farmers.

But this is not a normal farm bill year.

The process began in a normal fashion. The House and Senate Agricultural Committees began their obligatory field hearings in the spring of 2010. After a small hiccup related to committee leadership changes from the November 2010 election, hearings continued and commodity group positions began to take vague shape (or, in the case of dairy, were set in concrete).

But in mid-2011 the process of crafting agricultural policy was wrenched onto a new track, as it was merged with that of reducing the federal deficit. The inability of Congress to raise the national debt ceiling resulted in passage of the Budget Control Act of 2011 in early August. Among other things, this legislation created the Congressional Joint Select Committee on Deficit Reduction, which quickly became known as the Super Committee. The 12-member panel, consisting of an equal number of Republicans and Democrats from the House and Senate, was given a November 23 deadline for issuing a recommendation to Congress for cutting the federal deficit by at least \$1.2 trillion over 10 years. Congress would then be required to take an up-or-down vote (no amendments) on the Committee recommendation package by the end of the year.

The chairs and ranking members of the House and Senate Agricultural Committees¹ saw the Super Committee

as a means of delivering a pre-emptive strike. Following Super Committee rules, the ag committee leaders—dubbed the Gang of Four—submitted a farm bill to the Super Committee that would have cut the USDA budget by \$23 billion over 10 years. None of the other members of the agricultural committees were involved in drafting this bill, and its contents were not publically divulged. However, enough leaked out to indicate that commodity programs would have been cut \$15 billion, conservation \$6 million, and nutrition programs \$4 billion. The excess \$2 billion would have been used to fund some programs with no Congressional Budget Office (CBO) baseline.²

The Super Committee crashed and burned. On November 21 its leaders announced that despite much hard work, the panel could not reach agreement on the mandated deficit reduction package. The Super Committee's failure triggered a process known as sequestration, which calls for across-the-board cuts of \$1.2 trillion over 10 years.

More will be said about the possible impacts of sequestration on USDA programs in the following sections, which cover budget matters and specific farm bill programs. However, it is possible that part or all of the sequestration requirements will be rescinded. It is also possible that the semi-secret Gang of Four Farm Bill may be resurrected by linking it to other legislation. It's also possible that there won't be a 2012 Farm Bill. Legislators facing re-election in 2012 may deem it prudent to delay a farm bill debate to 2013 by enacting a one-year extension of the 2008 Act.

The upshot is that, although we are in the midst of the Farm Bill cycle, as we draft this edition of *Status of Wisconsin Agriculture*, we're not able to offer precise insights on what to expect in the new legislation in terms of contents or timing. Nevertheless, we will work with what we have, pondering the possibilities while warning readers about the uncertainty and fluidity of the 2012 Farm Bill process.

¹The Senate Agriculture Committee Chair is Debbie Stabenow (D-MI) and the ranking member is Pat Roberts (R-KS). The House Agricultural Committee Chair is Frank Lucas (R-OK) and the ranking member is Collin Peterson (D-MN).

²For further details, see: <http://sustainableagriculture.net/blog/2011-farm-bill-rip-part-two/>.

Budget Outlook

Bill Dobson (608-262-6974)

One thing is certain about the 2012 (or perhaps 2013) Farm Bill: It will be drafted under stringent budget constraints. That's because the current trajectory in federal deficits has been deemed unsustainable. Even if the sequestration required by the Budget Control Act generates \$1.2 trillion in deficit reductions and other provisions of the Act produce projected savings, these actions will be too little to put U.S. budget deficits on what Congress considers a sustainable path. Making this happen would require deficit reductions totaling about \$4 trillion by 2021. Further major steps to reduce the deficits undoubtedly will be postponed until after the 2012 elections. But the need for additional deficit reductions will be part of the uncertain and shifting backdrop for drafting new farm legislation.³

What follows is a discussion of impacts of sequestration, but it also serves as a general description of budget constraints that will limit spending for the 2012 Farm Bill.

As noted in the introduction, failure of the Congressional Super Committee to identify and recommend to Congress deficit reductions of \$1.2 trillion triggered across-the-board cuts—or sequestration—of spending, equally split between security and non-security programs. The cuts apply to mandatory and discretionary spending during 2013 to 2021.

Certain programs are exempt from across-the-board cuts, including Medicare, Social Security, Medicaid, civil and military employee pay, veterans' programs and a few USDA programs. Security programs would be defined narrowly beginning in 2013, putting emphasis on cutting the defense budget. Current sequestration provisions would call for defense cuts of as much as \$55 billion per year beginning in fiscal 2013.

At this writing, it is unclear whether other laws will replace sequestration in 2012 or 2013. Sequestration is flawed legislation. A “poison pill” built into the legislation would trigger budget cuts that are likely to be so widely unacceptable that Congress will craft substitute legislation. For example, Senate Budget Committee analysis shows that defense accounts for about 20 percent of the federal budget but is targeted for about half of the sequestration cuts. Many in both parties agree that the scheduled sequestration cuts for the Department of Defense must be avoided. This alone is probably enough to force Congress to develop replacement legis-

lation in 2012 or 2013. President Obama's threat to veto legislation that makes large changes in sequestration introduces a wild card into negotiations.

Budget constraints almost certainly will limit spending for the 2012 Farm Bill, even if full sequestration fails to materialize. The only questions: How large will the cuts be and which programs will bear the brunt?

Insights about the size and nature of USDA budget cuts under sequestration or alternative legislation can be gleaned from the department's budget and a look at constituent support for various programs. By far the largest item in the USDA's 2012 budget is nutrition assistance, accounting for about 74 percent of estimated outlays. The biggest piece of the nutrition assistance program is the Supplemental Nutritional Assistance Program, or SNAP (formerly known as food stamps).

Estimated USDA Budget Outlays, Fiscal 2012

| <i>Item</i> | <i>Budget Outlay* (\$ billion)</i> | <i>% of Total</i> |
|-----------------------------|--|-------------------|
| Nutrition Assistance | 107 | 74 |
| Farm and Commodity Programs | 19 | 13 |
| Conservation and Forestry | 10 | 7 |
| All Other** | 9 | 6 |
| Total | 145 | 100 |

Source: USDA, FY 2012 Budget Summary and Annual Performance Plan.

*These outlays do not reflect modifications included in the FY 2012 Agricultural Appropriations Act passed in November 2011.

**Includes Rural Development, Research, Food Safety, and Marketing and Regulatory Programs.

Under current law, nutrition assistance programs are exempt from sequestration. Even if this weren't the case, food stamps would not have been a priority for cuts given the large number of people receiving nutrition assistance—nearly 46 million people, or 15 percent of U.S. residents, were receiving food stamps in mid-2011.

There will be intense scrutiny of most items in the conservation and forestry category as well as programs listed under “all other.” The Conservation Reserve Program (CRP) is an exception. Like nutrition assistance,

³ See earlier section on Macroeconomics and Trade for a more comprehensive discussion of the possible effects of continued increases in U.S. debt and likely Congressional action to address the debt issue.

CRP expenditures are exempt from sequestration by law. But while there are strong pockets of support for other programs in these two budget categories, it is unclear whether those championing these items have enough support in Congress to prevent them from being cut.

After nutrition, USDA's second biggest outlay in 2012 was for farm and commodity programs. This alone is enough to draw the attention of budget cutters. Farm organizations and others know that certain commodity programs are likely to be cut, which has led them to take pre-emptive action, recommending that some programs be restructured and others jettisoned, in hopes of preserving a workable underpinning for a viable 2012 Farm Bill. Some of these recommendations were submitted to the Congressional Super Committee by the Gang of Four.

What has emerged in the 2012 Farm Bill process is a long list of complex proposals for restructuring farm programs. One agricultural economist, Carl Zulauf of Ohio State University, compiled data on 10 program revisions advocated by major farm organizations, legislators, individuals and the Obama Administration. Programs targeted for change or elimination included direct payments, countercyclical payments, marketing loan benefits and price risk and revenue protection programs identified as ACRE, SURE and ARRM. Over a 10-year period, the Administration's proposal would eliminate direct payments and reduce spending on farm safety net programs by \$30 billion, conservation programs by \$2 billion and crop insurance by \$8 billion.

What will survive from these evolving proposals remains to be seen. But it is quite likely is that direct payments—which total about \$5 billion per year—will fall under the budget ax. In recent years, annual direct payments have totaled about \$2 billion for corn producers, \$1 billion for wheat producers, \$600 million for soybean producers, \$600 million for cotton producers and \$450 million for rice growers.

Indications of the total size of USDA budget cuts appear in an October 17, 2011 letter from leaders of the Senate and House ag committees—the Gang of Four—to the now defunct Super Committee. In recommending the

\$23 billion cut to mandatory spending programs under the committees' jurisdiction, the leaders chronicled the budget cuts that had been made in recent years to commodity programs, crop insurance, conservation and the SNAP program. They noted, in particular, that commodity title program spending was almost \$25 billion below CBO projections made when the 2002 and 2008 Farm Bills were passed. The leaders pointedly argued that:

“Deficit savings at this level (\$23 billion) are more than any sequestration process would achieve and should absolve the programs in our jurisdiction from any further reductions.”

Collin Peterson, ranking member of the House Agriculture Committee, agreed with this argument. He predicted that the cuts to the USDA budget automatically triggered under sequestration would be smaller than the \$23 billion that would emerge from the Super Committee.

However, in a scenario described by the Congressional Budget Office, USDA would face about the same level of cuts under sequestration as under the Gang of Four's \$23 billion proposal. The CBO has estimated that Farm Bill cuts under sequestration could be as high as \$15.6 billion. This is based on the assumption that outlays for food stamps and CRP totaling about \$7.8 billion would be exempt from sequestration. These two items also accounted for \$7.8 billion of the \$23 billion in budget cuts for the proposed 2012 Farm Bill. Presumably food stamps and CRP would be exempt by law from cuts under the Farm Bill, much as they are under sequestration. If so, subtracting the \$7.8 billion from the (partly phantom) \$23 billion in cuts proposed by the ag committees leaves \$15.2 billion, nearly the same as cuts projected under sequestration.

Given the uncertainty about which sequestration provisions will survive the Congress, it is difficult to estimate the size of USDA budget cuts that would occur under sequestration. If sequestration survives largely intact, it will be up to Congress to decide how to allocate spending to specific programs in the security and non-exempt other budget categories when it writes appropriation bills for 2013 and later years.

Dairy Programs

Mark Stephenson (608-890-3755)

Introduction

The development of new dairy policy has been an unusual process in several respects. The process started before the ink was dry on the 2008 Farm Bill, which included few changes in dairy programs. Dairy industry groups were concerned that the Milk Income Loss Contract (MILC) program and the Dairy Product Price Support Program (DPPSP) did not adequately address increasing volatility in milk and feed prices. A number of creative proposals were developed to potentially mitigate erratic shifts in dairy producer margins.

The severe cost-price squeeze that dairy farmers experienced in 2009 intensified and accelerated efforts to draft legislative proposals to prevent a recurrence before the normal farm bill process began. House and Senate bills were introduced in 2010 that would have established base production levels for dairy farmers and assessed those who exceeded their base production when milk price-feed cost margins reached trigger levels. At about the same time, the National Milk Producers Federation (NMPF) expanded its broad-based dairy policy proposal, called Foundation for the Future (FFTF), to include a supply management component along with a margin insurance component proposed earlier. The NMPF proposal gained traction and ultimately was introduced nearly intact in the House as the Dairy Security Act of 2011 (DSA). A slightly modified version was introduced in the Senate as the Rural Economic Farm and Ranch Sustainability and Hunger Act of 2011 (REFRESH).

Then the Gang of Four took control and the process of developing agricultural legislation changed direction. While the specifics of the dairy proposal submitted to the super committee by leaders of the House and Senate agricultural committees have not been divulged, it is widely believed to be a somewhat tweaked version of DSA/REFRESH. Despite the Super Committee failure, the DSA/REFRESH dairy proposal will serve as the starting point for deliberation of dairy policy, however that might evolve.

Proposal Details

DSA and REFRESH contain nearly identical language for the dairy provisions and will be interchangeably referred herein as the DSA except where noted.

World circumstances, such as growing demand for dairy products, a weak U.S. currency and elimination of EU milk quotas in 2015 have provided the economic incentives for the United States to become a significant exporter of dairy products. The Dairy Export Incentive Program, or DEIP, is no longer needed and little used. DSA would eliminate that program to reduce the Congressional Budget Office's (CBO) calculated budget exposure.

DSA would also replace both existing safety net programs, the Dairy Product Price Support Program (DPPSP) and Milk Income Loss Contracts (MILC), with a Dairy Producer Margin Protection Program (DPMPP) as an insurance policy administered by USDA's Farm Service Agency (FSA). FSA would calculate a monthly margin by subtracting the value of a standardized dairy ration from the U.S. all-milk price. This calculated margin would become the trigger for indemnity payments to participating producers.

If the DSA is passed into law, dairy producers would have the opportunity to register for the DPMPP within the first year after enactment. Producers would have an historic production base, defined as their highest milk production in the three calendar years prior to when DSA is signed into law. Basic margin protection below a \$4/hundredweight level would be provided to participating producers at no cost.⁴ Producers would receive an indemnity amounting to the difference between \$4 and the calculated margin on 80 percent of the historic base.⁵ An indemnity would be triggered if the average margin for two consecutive months is below the trigger level.

Each producer would have the option of increasing the level of margin protection, in 50-cent increments up to \$8, by paying a premium. On any higher levels of protection, a producer can choose to protect between 25 and 90 percent of his or her production history. And, on higher levels of protection, a producer can opt for a growth option on the production history. The growth option would reset the production history to a higher annual average level of production if milk production on the farm increases over time.

⁴New entrants can establish a production base by estimating what their annual production will be during the first 180 days of operation of the facility.

⁵If current milk production is less than 80% of your production base, you are paid on your actual level of production.

For example, suppose a producer sells 1,200,000 pounds of milk annually and chooses a \$5.50 margin protection level at 75 percent of the farm's production with a growth option, and that two years later production has grown to a new base of 2,400,000 pounds of milk. If a margin is calculated to average \$3.50 for two consecutive months, then an indemnity is triggered and the producer would receive a \$0.50 payment (up to the \$4 basic level) on 80 percent of the initial 1,200,000 base divided by 6 for the two-month period or \$800: $(1,200,000/6) \times 0.80 \times (\$0.50/100) = \$800$. The producer would also be paid the supplemental insurance up to the \$5.50 coverage level. That payment would be \$4,500, calculated as $(2,400,000/6) \times 0.75 \times (\$1.50/100) = \$4,500$. The total indemnity payment would be \$5,300 for the two-month trigger period. If the next consecutive two month period has an average margin of \$4.50 the producer would not be paid the basic level of protection but would receive an indemnity payment of $(2,400,000/6) \times 0.75 \times (\$1.00/100) = \$3,000$ based on supplemental coverage. And if the subsequent consecutive two month period has a calculated average margin of \$6.50, then no indemnity is paid.

The chart below shows what the calculated value of the proposed margin would have been over the past five years. Note that over that time frame, the margin fell below \$4/cwt only in 2009 and was under \$6/cwt only

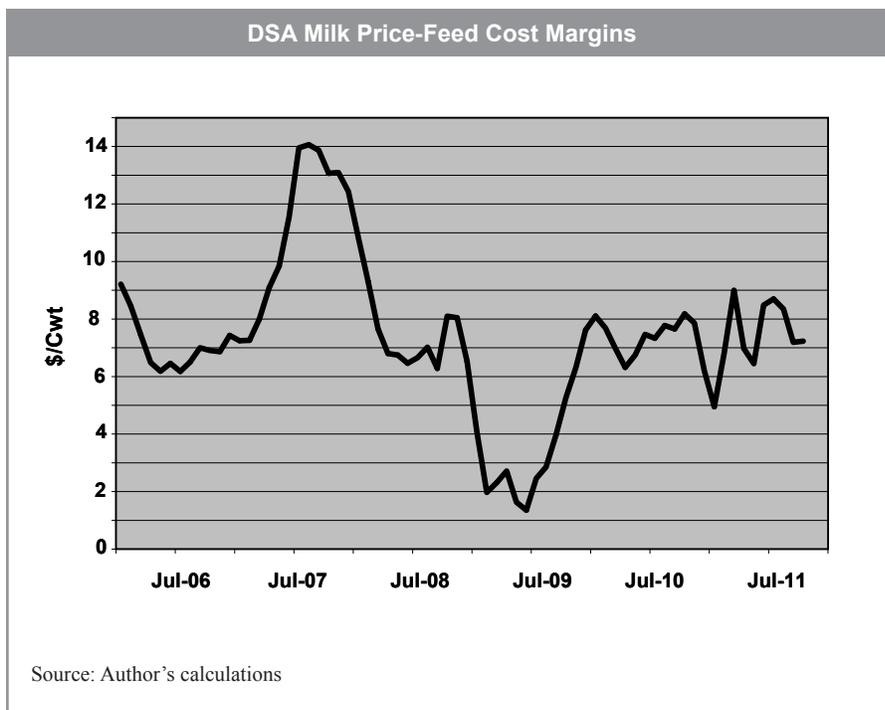
once other than during 2009. This suggests that DPMPP indemnity payments would be infrequent except at higher levels of protected margins. However, the past is not a good guide to the future given the much higher feed prices experienced since 2008.

The DSA also includes the Dairy Market Stabilization Program (DMSP), which is intended to moderate price volatility. The DMSP is linked to the DPMPP in that a producer who signs up for the margin protection program would be obliged to participate in the DMSP as well. Using the same margin calculations as the DPMPP, participating producers would be obligated to reduce milk marketings from their production base as follows: by 2 percent when the margin value is below \$6 for two consecutive months, by 3 percent if the margin falls below \$5 for two consecutive months, or by 4 percent if the margin falls below \$4 for a single month. Milk that exceeds the specified reduced production is considered "in penalty," and the producer would not be paid for its value. The maximum amount of milk in penalty would be 6, 7, or 8 percent of current marketings respectively. The penalty continues until there are two consecutive months with margins above \$6.⁶

A producer can continue to market as much milk as he or she wants, even though a portion of the milk may be in penalty. They would not receive payment for this milk

volume, but a national board would receive a payment from processors for the penalty milk value. The monies collected from the sale of penalty milk would be used to purchase dairy products for distribution to non-commercial outlets, such as food banks, or for other demand-expansion activities.

Under the DSA, participating milk producers would be able to choose one of two methods for determining their production base by January 15th of each year. The base would be either the average monthly marketings for the three months preceding the announcement of a trigger event, or the average monthly marketings for the same cal-



⁶The penalty is also suspended if the U.S. price for cheddar cheese or skim milk powder is more than 20 percent above the world price for two consecutive months for the DSA and a lower schedule for REFRESH.

endar month in the previous year. Participation in the DPMPP and the DMSP is a one-time voluntary decision that would be made after the bill was signed into law.

Since federal milk marketing orders (FMMOs) do not have federal budget implications, they are not a target of cost-cutting measures. The minimal costs of administering FMMOs are borne by the processors who are regulated under the orders. However, the DSA would seek to reform FMMOs in one key aspect: milk price discovery.

Each month the FMMO determines the minimum price that must be paid for milk. Over the years, several different methods have been used to do so. For many years USDA surveyed Grade B manufacturing milk plants (Grade B milk is not eligible for use in FMMO plants) in Minnesota and Wisconsin to determine an average value that was arrived at under competitive conditions. This competitive pay price was used as a base in FMMOs to regulate the minimum price that must be paid for Grade A milk used in the orders. As Grade B farms either went out of business or upgraded to Grade A, regulators concluded that there wasn't enough Grade B milk to determine a national price for regulated milk. In 2000, FMMO reform adopted formulas to determine the value of milk from the price of dairy products made from milk—cheddar cheese, butter, nonfat dry milk and whey. These product price formulas have been a point of controversy for milk processors and dairy farmers alike.

The DSA would require USDA to stop using product price formulas to set prices for class III milk (used to make cheese) and adopt a competitive price instead. The specific methods of determining a competitive pay price would be left up to the FMMO hearing process.

Other Possibilities

Support for a policy to help moderate price volatility has been growing over the last decade. However, producers are divided in their support for the DSA and especially the DMSP portion which acts much like a quota program. Producers may not like volatility, but many object to facing a penalty for milk marketings exceeding a temporary quota. Dairy processors are uniformly opposed to any form of a supply management. While the DSA and REFRESH are likely to be the starting point for dairy policy discussions in the Farm Bill debate, they may not be the end.

Under sequestration, expenditures for dairy programs, as for all agricultural commodity programs, would have to be reduced from the Congressional Budget Office's baseline. The percentage reduction is unknown, but it is likely that obligations for dairy could be mostly met simply by eliminating the Dairy Product Price Support Program and the Dairy Export Incentive Program. Both programs have been inactive, so terminating them would not perceptively impact dairy producers or markets. MILC is the only program that has generated significant costs in recent years but, due to CBO's scoring mechanism, dropping price support and DEIP would accomplish much of the needed budget savings. If additional savings are needed, MILC could be altered by lowering the percentage payout, changing the trigger level or lowering the production cap.

Indeed, if a new farm bill isn't enacted, beginning September 1, 2012, the MILC payment rate under the 2008 Farm Bill drops from 45 percent to 34 percent, the farm production cap drops from 2.985 million pounds to 2.4 million pounds, and the feed cost adjustment trigger increases from \$7.50/cwt to \$9.50/cwt. These changes would substantially reduce MILC expenditures.

Concluding Comments

Crafting dairy policy was much easier 60 years ago when Federal Milk Marketing Orders and the Dairy Price Support Program were enacted as part of permanent legislation. At that time, dairy farms were much more homogeneous in size and business models. Any problem that existed was probably a problem for all farms. Today, policy that solves one farm's problems may create additional problems or unusual opportunities for another. Consequently, dairy interests have been unable to speak with a single voice, making it difficult for Congress to design programs that are embraced by a large majority of the industry.

The Dairy Security Act of 2011 will be a point of departure for debate of dairy policy in the next Farm Bill. However, in our current dairy and political environment, radical changes in policy will be difficult to enact. It may be that the path of least resistance is to make minor alterations to existing policy that effectively moves toward more open world markets and less regulation in the long-run.

Other Commodity Programs

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Two primary factors will shape programs for grains, oilseeds, and other “program” crops (e.g., rice, sugar and cotton) in the next Farm Bill: elevated prices for most program crops and tight budgetary constraints. There’s general consensus that some sort of farm safety net is needed, but with budgetary pressures limiting available funds, spending on commodity programs will almost certainly be reduced. Consequently, crafting programs that protect producers from precipitous drops in crop revenues while simultaneously reducing government spending will be a major legislative goal—and a formidable challenge.

Several commodity and farm organizations and other interest groups, as well as various politicians, have developed proposals for a revised farm safety net.⁷

The current farm safety net is composed of three parts:

Commodity programs. Major ones include direct payments, counter cyclical payments, marketing assistance loans, and the average crop revenue election (ACRE) program, with projected costs at \$5.7 billion per year.

Crop insurance. This is the largest program in terms of farmer participation and acres covered, with a projected cost of \$7.8 billion per year.

Disaster assistance. This is projected to cost about \$1.7 billion per year in federal spending, with most of the spending for the supplemental revenue assistance payments (SURE) program created by the 2008 Farm Bill.

Below, we discuss what to expect for each of these three parts of the current farm safety net.

Direct payments, a fixture of commodity programs since the 1996 Farm Bill, have become a target of criticism in light of record high prices for many program crops. It seems very likely that direct payments will be eliminated by the 2012 Farm Bill. Producer groups for most commodities and in most regions in general have come to accept the end of direct payments (e.g., American Soybean Association, National Cotton Council). Even the American Farm Bureau Federation’s proposal accepts the reality of reduced direct payments.

What is not clear is what will happen to counter-cyclical payments, marketing assistance loans and the ACRE

program. Several proposals call for elimination of counter-cyclical payments, which is not surprising since they have not been triggered for major program crops such as corn and soybeans since 2004. But other proposals retain counter-cyclical payments for the same reason—long-term price projections for most major crops indicate that they would seldom if ever be triggered. So politicians could say that they maintained price support programs for their farm constituents at little actual projected budgetary cost. But while counter-cyclical payments may survive in some form in the 2012 Farm Bill, any revised program will provide little actual income support if crop prices remain near current levels.

A few proposals also call for elimination of marketing assistance loans, but the call is not very loud. These programs don’t cost much, because at current high commodity prices, marketing assistance loans rarely trigger loan deficiency payments. In some sense, the program is serving its original intent of providing farmers with low-interest loans to help them manage cash flow. Farmers can use marketing assistance loans to pay back operating loans without being forced to sell their grain when prices are low around harvest time. The program is used by many farmers and has little federal cost under current price projections, so it is likely to remain in some form in the 2012 Farm Bill.

The ACRE program was created by the 2008 Farm Bill as a new revenue-support program to replace counter cyclical payments and other price support mechanisms. Farmer enrollment in ACRE has been lower than anticipated, probably because most farmers find the program too complicated. However, ACRE has in some sense served as a relatively low-cost experiment in revenue-based support programs. Much has been learned about what producers want in such a program—namely simplicity and transparency. Farmers want a program they can understand and can evaluate as to when and how much it will pay. As a result, almost all proposals eliminate ACRE and propose new programs that build on this experience.

Several proposals link payment parameters more explicitly to the crop insurance program, since most farmers are familiar with crop insurance and how it works for their farm. Thus some proposals switch to using yield guarantees and prices from crop insurance policies. Also, proposals typically tie payments more closely to the farm geographically, using yields at the crop reporting district or county level in a manner similar to a Group

⁷For an excellent summary of various proposals, see Shields and Schnepf, Farm Safety Net Proposals for the 2012 Farm Bill, Congressional Research Service, November, 2011. Available online at: <http://farmpolicy.com/wp-content/uploads/2011/11/R42040-111011.pdf>.

Risk Income Protection (GRIP) crop insurance policy. Some proposals focus on revenue by crop, but most focus on supporting whole farm revenue.

Based on these proposals, it seems likely that ACRE will be replaced by a new program that will support revenue, probably at the whole farm level. Predicting the other details of this program is difficult given the diversity of the proposals currently on the table and the uncertainties of the political process. However, given that most of the proposals use interesting acronyms (e.g., ARRM, REFRESH, SRRP, STAX, CROP), we can expect a catchy name and another abbreviation for farmers to learn.

SURE, the permanent disaster program created by the 2008 Farm Bill, is eliminated in most proposals as a cost-saving measure. As a disaster program, SURE payments totaled over \$2 billion for losses in 2008, including over \$70 million in payments to Wisconsin farmers. With these high payouts, one would think SURE would be a popular program. But it requires enrolled farmers to purchase crop insurance for all their crops, including things like forage, a requirement many farmers find burdensome. Also, because SURE covers shallow losses that remain after crop insurance indemnities have been paid, some find the payments somewhat superfluous. Consequently, it is not surprising that the SURE program is slated for elimination in many 2012 Farm Bill proposals.

SURE, however, replaces ad hoc disaster programs, a desirable feature that may be preserved in the 2012 Farm Bill. Furthermore, producers of specialty crops do not have access to crop insurance policies that provide as much coverage as those available for major crops such as corn and soybeans. For example, revenue insurance policies are not available for most specialty crops. If the Specialty Crop Alliance wants a disaster program like SURE, a revamped SURE or a similar program may continue, possibly targeted specifically to specialty crops.

To cover shallow losses for program crops, many argue that a more cost-effective alternative to SURE is to allow farmers to insure part of the deductible on their individual policies with a group policy such as GRIP. In the political horse-trading surrounding the Farm Bill, a proposal of this sort may gain traction as a disaster

assistance program, because it still covers shallow losses, but asks farmers who want it as disaster assistance to pay part of the cost in the form of insurance premiums. The only weakness of such a disaster program is that Congress has historically lacked the political discipline to resist passing ad hoc disaster programs as new disasters occur.

Crop insurance had its own title in 2008 Farm Bill for the first time, and this will almost certainly continue with the 2012 Farm Bill. Reforms to reduce crop insurance program costs were instituted for the 2011 crop year with the new Standard Reinsurance Agreement, negotiated with the crop insurance industry in a process started by the 2008 Farm Bill. Government savings are projected to total \$6 billion over 10 years due to reduced subsidies to insurance providers for administrative and overhead and changes in reinsurance rules.⁸ Insurance providers contend that the reductions are substantial and may jeopardize their ability to provide crop insurance. Based on these changes, one would expect little opportunity for budgetary saving from crop insurance—the low-hanging fruit has already been picked. Only the Administration's Deficit Reduction Plan proposes further reductions in the cost of the crop insurance program by further reducing the administrative and overhead subsidies, as well as reducing farmer premium subsidies.

As a replacement for commodity support or disaster aid, a few proposals substantially expand crop insurance in various ways. Others propose only small changes that would allow farmers to supplement individual coverage with a GRIP policy to cover part of the individual policy's deductible.

Any changes to the crop insurance program will likely expand rather than contract it. Many view crop insurance as a cost-effective way to create a comprehensive farm safety net, because farmers contribute by paying premiums and those who want more protection pay more. Just what these changes will be is difficult to forecast at this time, given the wide range of proposals. But we're not likely to see further reductions of the administrative and overhead subsidies paid to insurers. So if the costs of these programs must be cut, there may be shrinkage of the subsidies paid to farmers to offset their insurance premiums.

⁸ For more details, see Shields, Renegotiation of the Standard Reinsurance Agreement (SRA) for Federal Crop Insurance, Congressional Research Service, August 2010. Available online at <http://www.cnie.org/NLE/CRSreports/10Sep/R40966.pdf>.

Specialty Crops and Organic Agriculture

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Before the start of deliberations on the 2008 Farm Bill, numerous specialty crop organizations joined together to form the Specialty Crop Farm Bill Alliance to mount a unified lobbying effort. The strategy worked: Several programs were written into the bill to enhance specialty crop productivity and competitiveness.

The same coalition is following a similar strategy for the 2012 Farm Bill. Their opinions carry some weight, because specialty crops as a whole account for between one-third and one-half of the total farm gate receipts from U.S. crop production. Furthermore, leaders of the House and Senate Agricultural Committees have been receptive to the concerns of specialty crop producers. In particular, Senator Stabenow (D-MI), chair of the Senate Committee on Agriculture, is a strong supporter—not surprising given Michigan’s large production of specialty crops.

Historically, California has played a small role in Farm Bill debates. But as the largest agricultural state and home to the nation’s largest specialty crop industry, California has been a strong, influential supporter of the Specialty Crop Farm Bill Alliance proposals. Based on these and other factors, the Specialty Crop Farm Bill Alliance is asking for increases in federal funding for the programs they support, in spite of the climate of fiscal austerity that has settled over Washington.

Specialty crop growers believe their vision of federal support for agriculture in the 2008 Farm Bill is superior to that of other commodity groups, and they encourage a serious evaluation of agricultural policy along these lines for the 2012 Farm Bill.⁹ In general, they do not want direct income support, preferring policies that increase the productivity and competitiveness of U.S. growers. Based on their increasing influence and an apparent greater openness to new ideas for agricultural policy, they may find a receptive audience among members of both parties. All this could affect the 2012 Farm Bill in ways that are hard to predict at this time.

For the 2012 Farm Bill, the Specialty Crop Farm Bill Alliance has developed a simple three-page proposal¹⁰

that remains silent about commodity support other than advocating for a permanent disaster assistance program. Interestingly, the proposal asks for an end to the Planting Transferability Pilot Program, which allowed a producer to plant specialty crops on a set amount of base acres without permanently losing eligibility for commodity supports. While the Alliance lobbied for this pilot program in the 2008 Farm Bill, they apparently don’t think it worked. Given this lack of support, it seems likely that the program will be eliminated.

Regarding conservation programs, the Alliance supports targeting 25 percent of EQIP spending specifically for specialty crop growers, making pest management a priority for CSP, and eliminating adjusted gross income limits for conservation program participants.

Among the few specific programs it addresses, the specialty crop group’s Farm Bill proposal seeks to maintain the current level of funding or slightly increase it. This includes various nutrition programs that promote specialty crop consumption. However, in its effort to increase productivity and competitiveness, the group seeks more funds for the Specialty Crop Research Initiative and Specialty Crop Block Grants, with increased participation by growers and others from the industry. In addition, the proposal seeks increased funding for various pest management programs and an international database of maximum residue levels and other measures to improve exports of U.S. specialty crops.

Given its short and specific list of suggestions and its influence, it seems likely that the Specialty Crop Farm Bill Alliance proposal will see some success when the final 2012 Farm Bill is passed. This should be good news for Wisconsin’s large processing vegetable industry (ranked second nationally) as well as the state’s potato, cranberry and ginseng producers and processors. But it remains to be seen how many of the Alliance’s goals will be achieved given the current budget climate, and whether other commodity groups or organizations will adopt the Alliance’s vision for agricultural policy.

The Organic Trade Association also has put forth a set of Farm Bill priorities.¹¹ Citing the tremendous growth in the market for organic produce, the group’s proposal asks for additional funding of the National Organic Program in order to ensure the integrity of the USDA’s

⁹ John Keeling. “NPC Report: 2012 Farm Bill: Opportunity for Specialty Crops.” *American Vegetable Grower*, June 2011. Available online at <http://www.growingproduce.com/americanvegetablegrower/?storyid=5592&style=1>

¹⁰ Executive Summary of 2012 Farm Bill Recommendations. Specialty Crop Farm Bill Alliance. Available online at http://www.unitedfresh.org/assets/files/GR/SCFBA_Recommendations__Executive%20Summary_.pdf.

¹¹ 2012 Farm Bill Priorities Investments in Innovations. Organic Trade Association. Available online at: <http://www.ota.com/pics/documents/OTA2012FarmBillInvestmentsPaper.pdf>.

organic seal. Similar to the specialty crops group, the organics industry wants more funding for the existing organic research and outreach program. It also asks that EQIP funding be more accessible to organic farmers. Another request is to continue the USDA's organic data collection program so as to better track this evolving industry and help the federal crop insurance program develop more accurate crop prices to use for insuring organic growers. Finally, the proposal seeks continued effort to improve crop insurance and disaster assistance programs to better meet the risk management needs of organic growers.

Much like specialty crops, organic agriculture has influential supporters, and the 2012 Farm Bill will likely address some of this industry's concerns. Also similar to the specialty crops effort, the Organic Trade Association's proposal focuses on ways the industry as a whole can improve its productivity and competitiveness. Both the Specialty Crop Farm Bill Alliance and the Organic Trade Association offer an atypical vision of agricultural policy that may prove more successful in the 2012 Farm Bill than in the previous Farm Bill. If so, other agricultural interests may adopt similar strategies.

Conservation Programs

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Agricultural legislation has had a significant impact on conservation in agricultural landscapes. The nature of the conservation programs enacted through various Farm Bills and other legislation has evolved from a focus on land retirement, such as the Conservation Reserve Program (CRP), toward an increasing allocation of funding to working lands programs such as the Environmental Quality Incentives Program (EQIP). However, the interaction between conservation programs and commodity programs, such as direct payments and crop insurance, has been equally important in shaping environmental outcomes.

The current emphasis on federal budget-cutting makes it likely that conservation funding will be reduced in the 2012 Farm Bill. In this context, supporters of conservation programs will be working to identify legislative changes that will maintain or increase the effectiveness of conservation programs in achieving their intended environmental outcomes while simultaneously reducing government costs. This is a difficult task that will require tradeoffs that many would prefer not to have to make.

As discussed earlier, direct payments will likely be eliminated. Counter cyclical payments may also end, and the ACRE program will likely be transformed. But the federal crop insurance program is expected to expand in some manner. All of these changes will have important impacts on the Title II conservation programs. While conservation compliance was required in order to be eligible for direct payments, counter cyclical payments, marketing assistance loans and ACRE, there is no such requirement for participating in federal crop insurance. The weakening or removal of conservation compliance has been an issue of intense debate, with many conservation and agriculture interest groups raising concerns

about long-term impacts on soil erosion and related environmental issues.¹³ Although conservation compliance in a strong agricultural market has been a rather weak deterrent to converting prairie and wetlands to cropland, at a minimum it bars landowners from collecting government payments if they do not have conservation plans in place for cropping highly erodible land.

There is also concern that higher subsidies for crop insurance will counteract conservation gains made through federal land retirement programs such as CRP. A 2006 USDA ERS report¹⁴ estimated that higher subsidies for federal crop insurance programs in the 1990s spurred a 2.5-million acre increase in total cropland (0.8 percent), with many of these acres converted from pasture or hay. These converted lands are, on average, less productive and more environmentally sensitive than typical cropland. While conservation land retirement programs such as CRP are intended to target more environmentally sensitive and relatively less productive cropland, the crop insurance program tends to encourage conversion of land that is more likely to contribute to soil and nutrient losses when used for crop production. If the 2012 Farm Bill expands the crop insurance program, such changes could easily increase the transfer of acreage out of land retirement programs and into cultivation unless rules are developed to counter this incentive.

One suggestion for counteracting this negative effect of crop insurance is to require conservation compliance for producers who participate in federal crop insurance. The Izaak Walton League raised such a proposal recently and the position was even adopted, for a time, by the Iowa Farm Bureau.¹⁵ An argument in favor is that extending conservation compliance would not increase federal budget costs appreciably, but simply increase the requirements for those farmers who want to qualify for federal support. This idea may gain traction during the compromises and political horse-trading leading up to passage of the 2012 Farm Bill, because such a rule

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¹³ See “Farm Bureau Switches Stance on Crop Insurance” in the September 9, 2011 FarmProgress.com online edition of the Wisconsin Agriculturalist at <http://farmprogress.com/wisconsin-agriculturalist/story.aspx?s=52843&c=9>.

¹⁴ Lubowski et al., August 2006. Environmental Effects of Agricultural Land-Use Change: The Role of Economics and Policy. USDA-ERS Report Number 25 (82 pp.), online at <http://www.ers.usda.gov/Publications/ERR25/>.

¹⁵ 2012 Farm Bill Issue Briefs: II Conservation Compliance and Crop Insurance. Izaak Walton League of America, November 19, 2010. Online at <http://www.iwla.org/index.php?ht=a/GetDocumentAction/i/11073>.

Farm Bureau Reverses on Conservation. The Des Moines Register, August 31, 2011, online at: <http://blogs.desmoinesregister.com/dmr/index.php/2011/08/31/farm-bureau-reverses-on-conservation/>.

change could gain votes from conservation-minded politicians. The amount of crop acreage under conservation compliance requirements would increase to include that of commodity crop farmers without base acres who purchase crop insurance. Some specialty crop growers would also fall under conservation compliance rules.

Another important consideration is that conservation compliance provisions predominantly target working lands and produce different environmental benefits than do land retirement programs such as CRP. Land retirement programs are intended to remove the most environmentally sensitive lands from production, because these acres have a disproportionate impact on soil and water quality. Furthermore, acreage enrolled in land retirement programs provides habitat that is important to certain wildlife species—particularly grassland birds and waterfowl—that are of concern to conservationists. While conservation compliance provisions and working lands programs such as EQIP and the Conservation Stewardship Program (CSP) have produced measurable benefits for soil and water quality, they typically do not provide the contiguous acreage and perennial cover needed to support a diversity of wildlife. This issue is of particular interest to hunting groups, which are concerned about the impacts of CRP losses on wild game populations.

A draft summary of proposed changes to the Farm Bill legislation includes capping total CRP acres at 25 million, down 22 percent from the current cap of 32 million acres.¹⁶ The related reduction in CRP funding would be counteracted by continued allocation of funds to working lands programs, such as EQIP and CSP. An additional way to offset the effects of reducing

CRP funding would be to extend conservation compliance to farmers participating in federal crop insurance programs.

Better targeting of lands enrolled in CRP and other land retirement programs can improve the efficiency of program dollars and maximize environmental outcomes, partly offsetting the effects of reduced funding for these programs. One way to improve targeting is to provide flexibility in how federal conservation funding is distributed at the state level so as to allow state and county natural resource professionals to target the conservation issues of greatest need in their regions. Providing such flexibility may be another way to gain votes for passage of the 2012 Farm Bill at no additional cost to the federal budget.

In summary, conservation programs are expected to face substantial cuts in funding in the 2012 Farm Bill, forcing difficult environmental tradeoffs for some conservation groups. Most affected will be land retirement programs such as CRP, slated for almost a 25 percent cut in some proposals. Working lands programs such as EQIP and CSP will likely face smaller budget reductions. Conservation and environmental groups will be watching the debate closely, looking for ways to soften the blow of budget reductions or to make gains during this time of fiscal austerity. To gain votes from environmentally minded legislators, some rule changes may be instituted to offset the environmental impacts of these budget reductions without increasing federal budget outlays. Some possibilities include expansion of conservation compliance to include farmers participating in federal crop insurance programs and giving states more flexibility in the allocation of federal conservation funds to better target issues of greatest local need.

¹⁶ United States Senate Committee on Agriculture, Nutrition and Forestry: Recommendations to the Joint Selection Committee on Deficit Reduction, online at <http://www.agweb.com/assets/1/6/supercommittee%20farmbill%20recomendations.pdf>

Food and Nutrition Assistance Programs

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It's uncertain to what extent the food and nutrition assistance programs that make up the nation's food safety net will be affected by a new Farm Bill and legislative budget initiatives. Most federal food and nutrition assistance programs are administered by the U.S. Department of Agriculture, and funding for many of these programs is included in the Farm Bill. The Gang of Four farm bill submitted to the failed Super Committee apparently proposed a reduction in USDA food program expenditures of \$4 billion over 10 years. But unlike most other USDA programs, food and nutrition programs would benefit from sequestration, because cuts to certain programs are exempt.

It is not clear at this time how or whether sequestration rules will be followed. But even without the sequestration exemption, there is strong public support for food assistance as a way to mitigate some of the impact of high unemployment. This will likely prevent major cuts to nutrition funding in the new Farm Bill.

Following is a summary of major USDA food assistance programs and their national and state participation rates.

SNAP (Food Stamps)

USDA's Supplemental Nutrition Assistance Program (SNAP) is the nation's largest food assistance program. Formerly known as the Food Stamp Program, SNAP also supports nutrition education for participants and individuals and families eligible for SNAP. The 2011 "minibus" spending bill, which was signed into law on November 18, 2011, includes FY2012 funding of \$136.6 billion for USDA. This includes \$80.4 billion for SNAP along with administrative support and a \$3 billion reserve fund.

A significant number of U.S. households depend on SNAP. An average of 40.3 million people per month living in 18.6 million households participated in the SNAP

program during fiscal year 2010. Of those households participating, 76 percent included a child, an elderly person or a disabled nonelderly person. Nearly half of all participants were under age 18.¹⁸ In Wisconsin, roughly 980,000 residents received SNAP benefits in FY2010, nearly one of every six people living here.¹⁹

According to the U.S. Census Bureau, the financial value of SNAP benefits raised the income of 3.9 million Americans (1.7 million children) above the poverty line in FY2010.²⁰ Of participating households in Wisconsin, 46.5 percent were considered to be above the poverty line when SNAP benefits were taken into consideration, a 17.8 percentage point difference in proportion of households above the poverty line if only cash is considered. This places Wisconsin sixth among states where SNAP achieved the largest gains in lifting household income above the poverty threshold.

Other Nutrition Programs

Next to SNAP, the largest federal nutrition assistance programs are the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and a number of child nutrition programs (e.g., National School Lunch Program, School Breakfast Program, Child and Adult Care Food Program). WIC and child nutrition programs have not historically been included in the Farm Bill.

The Farm Bill is the legislative source of funding for The Emergency Food Assistance Program (TEFAP) and the Commodity Supplemental Food Program (CSFP). TEFAP provides food and assistance to food banks, local food pantries and other food distribution centers. The 2012 Agriculture appropriations in the 2011 minibus bill include \$260 million for TEFAP plus additional administrative funds for storage and transportation. The 2011 minibus legislation also includes \$176.8 million for CSFP to supplement the diets of low-income pregnant and breastfeeding women, other new mothers, infants, young children and elderly people with nutritious USDA commodity foods.

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¹⁸U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2010, by Esa Eslami, Kai Filion, and Mark Strayer. Project Officer, Jenny Genser. Alexandria, VA: 2011. Available online at <http://www.fns.usda.gov/ora/MENU/Published/SNAP/FILES/Participation/2010Characteristics.pdf>

¹⁹Wisconsin Department of Health Services. FoodShare Unduplicated Recipients Served by Agency by Calendar Year, 2010. <http://www.dhs.wisconsin.gov/em/rsdata/fs-undup-recipient-by-cy.htm>

²⁰Food Research and Action Center (FRAC). The SNAP Effect: Lifting Households Out of Poverty. http://org2.democracynaction.org/o/5118/p/salsa/web/common/public/content?content_item_KEY=9402

Extension and Research

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Introduction

Although most of the public attention to the 2012 Farm Bill has focused on commodity, conservation and nutrition programs, also on the table is support for the extension and research activities that occur at more than 100 U.S. land grant universities and colleges.

Mindful that the current Farm Bill expires at the end of September 2012, behind-the-scenes discussions about federal funding of extension and research have been going on since late last summer. Most of this discussion was centered on the congressional Super Committee's efforts to come up with long-term budget reductions. Compared to the policy development process leading up to previous Farm Bills, much of the discussion and debate this time around has occurred largely behind closed doors.

Given the failure of the Super Committee and the possibility of sequestration, there is considerable uncertainty about how agricultural extension and research will fare under the new Farm Bill. Perhaps the most useful insight comes from the funding decisions made by Congress for the FY 2012 budget, passed and signed by the President in November 2011. What follows will focus on (1) the current state of Farm Bill-connected extension and research programs, especially those created or re-shaped in the 2008 Farm Bill; (2) funding trends for land grant agricultural research and Extension over the past several years; and (3) the challenges of maintaining adequate resources to meet demands and difficulties connected to feeding a growing global population—now at 7 billion and growing by about 80 million a year—in a sustainable way.

Important Research and Extension Initiatives in the 2008 Farm Bill

Structural Changes

The 2008 Farm Bill created the Research, Education, and Extension Office (REEO) in the Office of USDA's Under Secretary for Research, Education, and Economics. It also designated the Under Secretary position as the Chief Scientist of USDA. One objective in making these structural changes was to elevate the stature and visibility of USDA research programs relative to other important federal research programs such as the

National Institutes for Health (NIH). In addition, all extramural programs that had been administered by the Cooperative State Research, Education and Extension Service (CSREES) were transferred to the newly created National Institute for Food and Agriculture (NIFA). A general trend of these structural moves included moving toward more competitive funding allocations, and in some cases, opening up eligibility for competitive research grants to non-land grant research universities.

Extension

Base federal funding for state Cooperative Extension programs comes from allocations through the Smith-Lever Act of 1914. The procedures for allocating these formula funds were modified in 2002. While the formula-based portion of Smith-Lever funds did not change significantly in the 2008 Farm Bill, that legislation did change the allocation of certain special emphasis extension funds from a formula basis to a competitive proposal-based process. This includes the Extension Integrated Pest Management (IPM) Program. Clearly, the push toward awarding federal extension funds competitively will be an issue for states that hope to maintain a vibrant and visible Extension service, and it will be important for state leaders to continue to communicate the value and impacts of these foundational Extension program investments.

Research

Similar to Smith-Lever formula funds for Extension, the 1862 Hatch Act provides ongoing funds for agricultural research to State Agricultural Experiment Stations. Allocation formulas for Hatch funding have not changed significantly in recent years, although there are increased requirements for aligning resources at a state and university/Experiment Station level with USDA-NIFA priorities. In most cases, Hatch funds are considered to be foundational to the work of the original (1862) land-grant universities. They cover funding for graduate students, faculty, and other key resources that universities need to compete effectively for funding that is allocated competitively.

The most significant change to research programs in the 2008 Farm Bill was to authorize the Secretary of Agriculture to establish a new competitive research grant program referred to as the Agriculture and Food Research Initiative (AFRI). AFRI replaced the National Research Initiative, but has the same goal of promoting research targeted at high priority needs for U.S. and global agriculture. These include:

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- Plant health and production and plant products
- Animal health and production and animal products
- Food safety, nutrition and health
- Renewable energy, natural resources and environment
- Agriculture systems and technology
- Agriculture economics and rural communities

Another significant change in the last Farm Bill was the requirement that several of the AFRI funding opportunities be integrated in the sense of combining fundamental and applied research with Extension and other educational activities in order to enhance technology transfer and increase the ultimate impact of funded research.

Other New Programs and Integrated Initiatives

The 2008 Farm Bill also modified or initiated other programs that have provided extension and research funding opportunities. Mandatory funding for the Organic Agriculture Research and Extension Initiative (OREI) was increased to \$20 million per year in 2010-2012 from \$3 million in 2008. The 2008 Farm Bill also created the Specialty Crop Research Initiative (SCRI), which provided \$230 million over five years for research and extension activities focused on important industry-based issues such as production efficiency and food safety. Other extension, research and outreach programs were

connected with the 2008 Farm Bill including Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers; Risk Management Education; Community Outreach Partnerships Program; Beginning Farmer and Rancher Development Program; and opportunities connected to the Sustainable Agriculture Research and Education (SARE).²²

Funding Levels and Trends

The table below shows the evolution of funding levels from passage of the 2002 Farm Bill through passage of the Agricultural Appropriations bill in November 2011. The chart summarizes the highest priority programs of the Budget and Advocacy Committee (BAC) of the Association of Public and Land-grant Universities (APLU). From 2002 to 2012, funding for priority programs has increased from \$667.6 million to \$925.5 million (39 percent).

Most recently, the FY 2012 budget was under considerable scrutiny with significant cuts passed by the House (for example, a 15 percent reduction to Smith-Lever Extension funds) and with flat funding from the Senate. The 2012 budget for priority programs turned out to be essentially flat, although there were some cuts to specific Extension activities and projects. These included water quality, food safety, and farm safety and youth farm safety education.

| NIFA Program Funding | | | | | | |
|---|--------------------|----------------|----------------|----------------|----------------|----------------|
| Program | Fiscal Year | | | | | |
| | 2002 | 2008 | 2009 | 2010 | 2011 | 2012 |
| | \$1000 | | | | | |
| <i>1862 Institutions Formula Programs:</i> | | | | | | |
| Hatch Act | 180,148 | 195,812 | 207,106 | 215,000 | 236,334 | 236,334 |
| McIntire-Stennis (Forestry) | 21,884 | 24,791 | 27,535 | 29,000 | 32,934 | 32,934 |
| Smith-Lever | 275,940 | 274,660 | 288,548 | 297,500 | 293,911 | 294,000 |
| Total | 477,972 | 495,263 | 523,189 | 541,500 | 563,179 | 563,268 |
| <i>1890 Institutions Formula Programs:</i> | | | | | | |
| Evans-Allen Program | 34,604 | 41,051 | 45,504 | 48,500 | 50,898 | 50,898 |
| Extension | 31,181 | 35,850 | 40,150 | 42,677 | 42,592 | 42,592 |
| Total | 65,785 | 76,901 | 85,654 | 91,177 | 93,490 | 93,490 |
| <i>1994 Institutions Extension</i> | 3,365 | 3,298 | 3,321 | 4,321 | 4,312 | 4,312 |
| <i>AFRI (NRI prior to 2008)</i> | 120,452 | 190,883 | 201,504 | 254,090 | 264,470 | 264,470 |
| Total of APLU/BAC Priorities | 667,574 | 766,345 | 813,668 | 891,088 | 925,451 | 925,540 |
| Source: Cornerstone Governmental Affairs | | | | | | |

²²Programs connected to the 2008 Farm Bill are nicely summarized at: <http://sustainableagriculture.net/publications/grassrootsguide/farm-bill-programs-and-grants/>.

The Future: Pressures will Continue—And So Will Needs

As noted earlier, efforts to create a sustainable budget trajectory will put continuing pressure on federal (and state) spending. Consequently, it is doubtful that it will be possible to maintain the growth in agricultural extension and research funding that has taken place since passage of the 2008 Farm Bill. This raises a critical question: Can we afford NOT to grow the resource base that fuels the agricultural and food system engine?

In a recent analysis commissioned by agricultural and Extension deans in the North Central Region, the Battelle Corporation outlined future funding challenges. In a press release prepared on the release of this study document, one of the report's authors noted:

*“...many of the most pressing challenges facing humankind have solutions rooted in modern agriculture and agbioscience. There is no other arena of economic activity, or field of science and innovation, that so directly addresses human survival and quality of life, global economic development, and prospects for an environmentally sustainable future...”*²³

The report lays out an array of global challenges that need to be at the center of the agenda of our land grant university system. The world's population is expected to increase from the current 7 billion to 9.3 billion by 2030. Food production needs will double during that time because of growing affluence and demands for protein. This growth in food production will need to occur despite the fact that agriculture will also be viewed as an increasingly important source of energy—a response to the growth of economies throughout the world and the importance of energy to national security.

Maintaining a firm foundation for fundamental and applied agricultural research, Extension and education for a new workforce is really not a choice; it is essential for the long-term sustainability of a growing global community.

²³<http://www.uwex.edu/ces/nceea/documents/PowerandPromiseNationalpressReleaseFINAL.pdf>

Update Web Sites

Because of the fluidity of the process of creating the new farm bill, we recommend interested readers periodically check the following websites for new proposals and up-to-date status reports related to issues of interest. The sites listed are specifically focused on information related to the 2012 Farm Bill.

Budgetary and General Issues

National Sustainable Agriculture Coalition : <http://sustainableagriculture.net/category/2012-farm-bill/>

Farm Journal: http://www.agweb.com/farmjournal/policy_coverage.aspx

Dairy Programs

National Milk Producers Federation: <http://www.futurefordairy.com/>

International Dairy Foods Association:
<http://www.idfa.org/key-issues/category/dairy-policy—economics/>

Crop and Conservation Programs

National Corn Growers Association:
<http://www.ncga.com/farm-policy/>

American Soybean Association: <http://www.soygrowers.com/issues/farbill.htm>

Food and Nutrition Programs

Food Research and Action Center (FRAC):
<http://frac.org/leg-act-center/farm-bill-2012/>

John Hopkins Center for a Livable Future Blog:
<http://www.livablefutureblog.com/>

